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1936

APRIL 30
1936

PRICE
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1936 Composite Catalog page 719

HYDRIL COMPANY

THE HYDRIL SYSTEM OF CONTROLLED PRESSURE DRILLING

(Patents pending on this system of drilling)

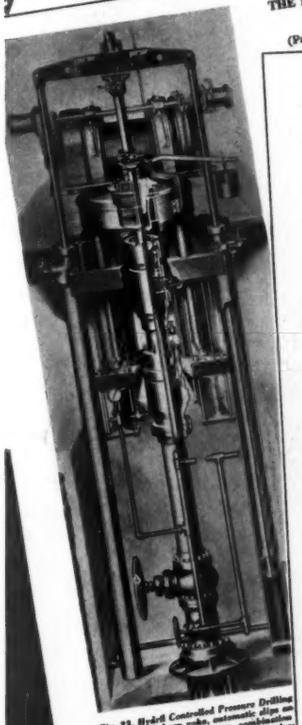

Fig. 23. Hydril Controlled Pressure Drilling showing pull-down yoke, automatic slips and mechanism, hydraulic rotary, combination auxiliary packers, master gate and hydraulic for operating the pull-down equipment. (Patents pending.)

1936 Composite Catalog page 713

HYDRIL COMPANY

HYDRIL INTERNAL FLUSH DRILL PIPE JOINT

(Patented and Patents Pending)

The illustration shows the fundamental principle involved in the Hydril Internal Flush Drill Pipe Joint. The diameter of the hole through the tool joint is the same as the full inside diameter of the drill pipe. This wide-open, unrestricted fluid passage allows a larger volume of fluid to pass through the drill pipe to the bottom of the hole with less effort on the part of the pumps. In addition, the smooth circulation passage is free of eddy currents.

Depending on size, Hydril Internal Flush Drill Pipe Tool Joints offer the operator 27% to 61% greater cross sectional area of fluid passage than any other tool joints. The fundamental objective of the "full hole" joint is to secure greater volume of circulating fluid. The maximum possibly attainable is secured only with Hydril Internal Flush Drill Pipe and Tool Joints.

The large inside diameter of the wide-open circulation passage of Hydril Internal Flush Joint Drill Pipe allows wire line core barrels, replaceable cutter bits, surveying instruments and internal fishing tools to be run through the pipe quickly and safely.

This drill pipe can also be used during production tests, for it can be bailed or swabbed as easily as can tubing.

Numerous tests show that the Hydril Drill Pipe Joint is the strongest drill pipe joint available. Every thread in the string is the same. When the pipe becomes somewhat slip-cut or bottlenecked, or the thread slightly worn through long use, both pipe and tool joints may be turned upside down to provide a new place for slips and new working threads. In this way the service life of a string of drill pipe, equipped with the Hydril Internal Flush Joint, may be greatly increased.

Externally upset drill pipe for Hydril threads and Hydril Internal Flush Tool Joints is to be upset by pipe mills according to Drawing S-8600. This drawing is on file at all the principal mills in the United States. The pipe can be furnished by the mills in any lengths up to 40 feet, except 2¾", which is regularly furnished in 30-foot lengths.

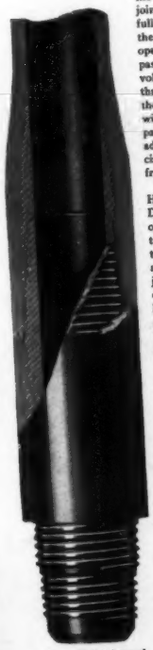

Fig. 1. Hydril Internal Flush Drill Pipe Joint.

BREAKING SUBSTITUTE

The Hydril Breaking Substitute is used with either Hydril Internal Flush Joint or Hydril External Flush Joint Drill Pipe for the purpose of eliminating wear of the female thread cut in the pipe.

The Breaking Substitute has a male thread at one end and a female thread at the other. The substitutes are placed in the drilling string at the top of each stand of pipe. All making and breaking of joints is done on the hardened threads of the tool joint pin and the Breaking Substitute box, thus protecting and prolonging the life of the drill pipe threads. As the Hydril drill pipe thread is non-galling, the Breaking Substitutes may be moved from one joint of pipe to another, further prolonging the life of the string by minimizing the effects of slip cutting.

Fig. 2. Breaking Substitute.

TABLE NO. 1

HYDRIL INTERNAL FLUSH DRILL PIPE JOINTS ARE FURNISHED FOR PIPE OF THE FOLLOWING SIZES AND WEIGHTS

Size—Outside Diameter of Drill Pipe	2⅜"	2½"	2¾"	3½"	4"	4½"	5"
Outside Diameter of Tool Joint and Upset	3⅛"	3⅜"	4¼"	4¾"	5"	5"	6⅜"
Minimum Inside Diameter of Tool Joint	1½"	1¾"	2"	2½"	3"	3½"	4"
Minimum Weight per Foot, Drill Pipe Only, Lbs.	6.65	10.40	13.30	15.50	*16.60	20.15	20.15
Minimum Weight per Foot, Drill Pipe Only, Lbs.	10	10	27	41	54	60	80
Weight of Tool Joint, Pounds	9	11	19	19	26	28	34
Weight of Shoulder Plugs, Each, Pounds							

*Non-recommended lower weights

Fig. 4. External Flush Drill Pipe Joint.

HYDRIL

Equipment is described in detail in your

1936 COMPOSITE CATALOG

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•

THESE ARE SHOW-DOWN FACTS

"Our 'Caterpillar' Diesel Tractor," reports one owner, "not only constructs roads quickly and cheaply through our operations, but maintains them thereafter at rock-bottom cost."

From a Texas owner: "My 'Caterpillar' Diesel Tractor does the same work as my old gasoline tractor, but my fuel cost is now $1.20 per day where it used to be about $7.70 with the old machine."

This "Caterpillar" Diesel Tractor is equipped with a winch for handling pipe—one of three outfits working for the same owner in Argentina

DIESEL

the OIL AND GAS JOURNAL

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THE FIRST 2 MILES ARE THE *Longest!*

And the successful setting of a string of 6-5/8" - 26 lb. Grade D casing which is more than 2 miles long is not an occurrence which "just happens."

We know that the crews who performed this work are proud of such an accomplishment. We, in turn, are proud that Baker Cement Equipment operated as efficiently as the crews.

*(*From Petroleum Engineer, January, 1936)*

In a well already noted for the establishment of records, the Union Oil Company has now run and cemented the world's longest string of 6-5/8" casing. The well is Lillis and Welch No. 1, Kettleman Hills, California, which was originally drilled to 10,944 feet by Ed McAdams.

Once holding the world's depth record and the record for the longest string of 7" casing, this well again came into the limelight about six months ago with a record string of 8-5/8" - 36 lb. casing * cemented at 9,081 feet. Within the past month, however, another record was made when a string of Spang Chalfant 6-5/8" "Extreme Line" 26 lb. Grade D casing was cemented at 10,815 feet. Being floated in, the weight of the string offered no difficulty in safe handling; and being cemented sufficiently far up the hole, the hazard of collapse was eliminated.

The bottom of the string was equipped with a Baker cement float shoe welded to the lowest joint of pipe. At the tops of the first and second joints were screwed Baker float collars. With a third joint made up on the upper float collar, a circulating head was set in the top and a mud pressure test was made for tightness of this section consisting of the float shoe, two float collars and three joints—a total length of about 125 feet. After 33 joints were in the pipe was filled with mud.

At 8,000 feet the 8-5/8" casing collapsed by an earth disturbance a distance of about six feet. This has been rolled out and a length of casing run through the tight [illegible] running a[illegible] feet [illegible] 6-5/8" [illegible] of the we[illegible]

CASING SET
Union Oil Co.'s
Lillis & Welch 1
Kettleman Hills

1078'
18⅝" - 84.5 lb.
Total Weight
91,091 lbs.

6710'
11¾-61 lb.
Total Weight
409,310 lbs.

9081'
8⅝" - 36 lb.
Total Weight
328,916 lbs.

10,825'
Bottom
7⅞" Hole

10,815'
6⅝" - 26 lb.
Total Weight
281,190 lbs.
Drilling

The internal construction of Baker Cement Float Collars is similar to that shown above at right.

This Company KNOWS that BAKER SAFETY Costs NOTHING EXTRA IN THE LONG RUN

The extra factor of safety obtained by using one Baker Cement Float Shoe and two Baker Cement Float Collars was of such great value as to over-shadow the slight additional cost.

These men *knew* that they had . . .

1. Strength beyond the collapsing strength of the casing;
2. Efficient Valve Action, due to ample passageways combined with a floating bakelite ball which instantly double-sealed against rubber backed by bakelite, at the slightest reversal of pressure; and,
3. Complete Drillability, with only the minimum amount of concrete and bakelite to drill out—both being materials which were *easily and quickly drilled up* into small, *harmless fragments* and *circulated out of the hole.*

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BAKER CEMENT EQUIPMENT

Falling Stocks of Gasoline Raise Hopes

GROUND for encouragement is found in the fact gasoline stocks in the United States have begun to subside at an increasing rate. Total finished and unfinished stocks on April 11 were 217,000 barrels lower than they had been April 4, according to American Petroleum Institute estimates. In the next week, ending April 18, the reduction was 651,000, almost three times as much. True this does not create an imposing hole in the 73,000,000 barrels on hand, an unprecedented accumulation which refiners and marketers hope to see disposed of during the approaching season of heavy consumption; but it is a start. The total inventories of gasoline are looked upon as about 10 per cent larger than they should be at this season, a result of abnormal weather conditions earlier in the year, and of crude runs to stills larger than had been recommended. But leaders in the industry express hope that the lively demand in sight, along with cooperation by refiners in keeping runs to stills down to reasonable levels, will remove what at this moment looks like a serious problem.

The daily average crude production of 2,941,652 barrels, indicated for last week by the accompanying table, exceeds the Bureau of Mines recommendation for April by 144,352 barrels. The daily average crude production for May recommended by the Bureau to meet estimated demand is 2,826,300 barrels, an increase of 10 per cent above May allowable for 1935.

Interest attaches to a wildcat test close to the North Dakota line in southeastern Montana which shows signs of important production. No tankage having been prepared, the well was shut in after the hole, 6,797 feet deep, had filled up with 4,500 feet of 27 gravity oil in 30 minutes on a drillstem test.

Production 2,941,652

Decrease 4,316

With the largest number of completions in five years, West Texas gave further evidence of the activity in that area. Of 41 completions all but six were wildcats. Thirty to 40 locations are being staked each week. Important extensions to the Means pool in Andrews County and the Cowden pool in Ector County were recorded.

Indications of the development in prospect for the Hugoton gas field in southwestern Kansas are apparent in plans announced for the drilling of 20 more wells.

Discovery of production on the eastern edge of Jim Wells County was the outstanding development in Southwest Texas. The test, expected to open a new field, is 2 miles southwest of the King gas field.

A new producing area was opened in Refugio County, Texas, by a test in the Thomas Webb Survey. The well started flowing 1,430 barrels of pipe line oil a day through a three-eighths inch choke at a depth of 5,698 feet.

Daily Average Production for Week

	April 25 1936	April 18 1936	April 27 1935
Oklahoma City	149,300	162,600	163,875
Seminole-St. Louis	104,900	103,650	101,675
Remainder of State	302,900	303,450	257,200
Total Oklahoma	557,100	569,700	522,750
East Texas	452,424	451,278	458,446
West Texas	180,797	180,184	145,768
North Central Texas	84,452	84,280	88,883
Texas Panhandle	64,000	61,637	61,667
East Central Texas	50,850	51,684	48,801
Gulf Coast Texas	248,297	247,750	181,580
Southwest Texas	79,446	78,204	62,505
Total State of Texas	1,160,266	1,155,017	1,047,650
North Louisiana	68,315	66,150	22,890
Gulf Coast Louisiana	145,687	144,750	101,720
Total Louisiana	214,002	210,900	124,610
Santa Fe Springs	43,500	43,400	34,600
Long Beach	67,500	67,850	60,000
Mountain View	25,600	25,500	10,250
Kettleman Hills	77,500	79,250	48,000
Remainder of State	353,800	358,000	305,400
Total California	567,900	574,000	458,250
Kansas	159,075	147,750	146,025
Arkansas	29,830	29,960	30,225
Eastern fields	108,500	108,500	104,500
Michigan	32,289	33,901	40,903
Rocky Mountain area	112,690	116,240	89,390
Total United States	2,941,652	2,945,968	2,564,303

Crude Oil Stocks in U. S.

(BUREAU OF MINES ESTIMATES)

Week ending April 18, 1936	313,045,000
Week ending April 11, 1936	311,837,000
Week ending April 20, 1935	341,445,000

SPARKS FROM THE NEWS

Capacity

Oil operators must keep in mind they have wells and plant capacity to overproduce even three million barrels daily market.

Precipitation

Heavy rains in "dust bowl" area furnish water to producers and assures more gasoline buyers this summer.

Illumination

Better lamps and low comparative costs explain five million rural homes using kerosene for illumination.

Expositions

Car making round-trip to three expositions this summer will require 700 gallons gasoline and 20 gallons motor oil.

Activity

There appear to be more geophysical crews than farmers at work in North Louisiana-Arkansas.

Shift

California inquires in East for cargo of natural gasoline. Reverse of fears few months ago.

Cheapness

Would-be producers of gasoline substitutes are embarrassed by its cheapness. Average refinery prices less than one cent per pound.

Suggestion

Governor Marland's opponents suggest he live in tent while test adjoining mansion is drilled.

Qualification

J. D. Collett told Chamber of Commerce of U. S. actual experience or training in oil industry is essential for conservation officials. States take notice.

Surplus

Crude stocks increased 1,208,000 barrels notwithstanding the increase in gasoline demand.

Profit?

Sale of 3,000,000 barrels hot oil showed profit of $807,051 to State of Texas. Price ranged from 10 cents to 95 cents.

Progress

More technological progress will be revealed at the International Petroleum Exposition than any previous show. Equipment engineers have not been idle during depression.

Power

Newspapers report movement of 1,000 Italian trucks toward Addis Ababa. Oil power is now as important as man power.

Protection

If federal control advocates use isolationism in California and Louisiana as an excuse for renewed agitation those states may wish they had entered the interstate compact.

Prosperity

Automobile sales continue at record pace and gasoline stocks may be whittled down faster than thought likely.

After the drilling boiler exploded it jumped over a house and slipped through the front door of this Gladewater, Tex., negro's home. Only his feelings were hurt.

Mounting Production of Crude Is Weakest Link in Situation

NEW YORK, Apr. 25.—The American oil industry entered 1936 in a characteristically hopeful frame of mind. It had ample reason for being optimistic. The industry had achieved a favorable record of stability during 1935; a firm market for both crude oil and refined products had been maintained throughout the year. The industry was all prepared to make 1936 a better year than 1935.

The present year started encouragingly with a general advance in crude prices east of the Rockies early in January. At that time it seemed the industry would have little to worry about in continuing the upward trend. Of late some doubts have been expressed in conservative quarters as to the effect of certain developments.

Executives in appraising the outlook must take into consideration all factors from production of crude to consumption of products, and are inclined to regard the situation only as strong as its weakest link. That weakest link, in their opinion, is the mounting production of crude. Daily average production, so far this year, is already up from 2,800,000 to nearly 3,000,000 bbls. The latter figure is approximately 400,000 bbls. a day greater than a year ago. A study of field developments indicates the 3,000,000-bbl. mark will soon be passed. The Texas side of Rodessa will offer a real threat, should production continue to be extended southwestward, where a large number of small leaseholds exist.

To offset this increasing production, the industry must experience a corresponding rise in consumption if price stability is to be maintained. The heavy consumption of fuel oils during the winter has been a saving factor, but the industry from now on will have to depend to an increasing extent on the gasoline market. While estimates of future consumption are entirely favorable, the industry can best insure to itself a good year, by placing the necessary curb on crude production.

Inquiries regarding the present status of the gasoline market bring comments which invariably go straight back to crude. One executive, calling attention to the developing weakness in the gasoline market in certain eastern sections, states his belief the chief hope for improvement lies in a tighter crude market.

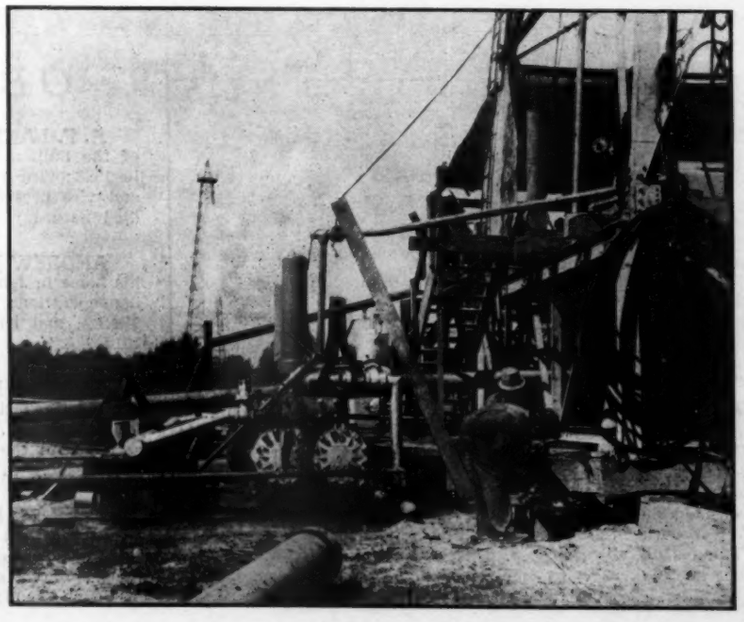
More than one executive points out a basic defect in the present proration system, whereby the acreage factor is not given sufficient weight in fixing allowables. Proration largely on a "per well" basis has resulted in overdrilling, entailing both excess production costs and a growing desire by producers to take more oil out of their wells. The overproduction which this encourages defeats the real purposes of proration, physical and economic conservation.

The next step after revision of the proration base, it is felt, should be a broadening of the interstate compact to include Louisiana and California. The many new discoveries in Louisiana have tended to place this state in a key position.

Meanwhile executives have noted the constructive views expressed by Governor-Elect Judge R. W. Leche, despite his opposition to Louisiana joining the interstate compact.

One executive points out that the interstate compact is undoubtedly the best protection the industry has against federal control, and probably the industry ultimately will have to choose between the two.

Photographs show Rodessa activity



It is emphasized producers cannot very well afford to act and think independently of refiners and marketers, as these branches are absolutely interdependent, from both an operating and profit standpoint. The objective of the industry is making a profit. But one executive supplements this by stating the objective should be supplying products to the public at a reasonable price, and still make a profit.

Refiners' Problems

The belief is generally held that the refining branch this year has given a particularly good account of itself. Runs of crude oil have been relatively high and record gasoline stocks have been piled up, but this is attributed to necessity for providing for a record demand for fuel oils during the winter. Unfortunately, due to the import taxes on heavy crude and fuel oil, some large coastal refineries have been forced to use American crude of higher quality than normally imported which naturally has been followed by excessive gasoline output.

Great strides have been made by the refining industry in development of new processes in the manufacture of gasoline, lubricating oils, and other products. These have involved installation of new equipment, and in many instances scrapping the old. Some believe the present refining capacity is adequate but there is plenty of room for modernization of equipment and methods. Obviously the refining branch is relatively free from many of the difficulties which beset producing and marketing. There seems to be nothing which the refining branch is now doing, which could be construed as threatening the stability of the industry as a whole.

The marketing branch not only is worried about the crude situation, but increasing taxation. This latter phase is being met by a gradual withdrawal from the retail business. Chain store taxation, embracing retail gasoline stations, is probably the chief cause of this trend. Officials of marketing companies in states not affected directly by chain store taxes have been quietly rearranging their marketing plans. Socony-Vacuum Oil Co., Inc., recently sold one of its largest chain of retail outlets in the New York area to a group from which it now leases the stations. This step, it is believed, marks the beginning of withdrawal from the retail gasoline business of many large eastern marketers.

Many executives now believe the industry never should have entered the retail gasoline business. However, only in recent years has this been made evident by increase in tax legislation, and the facts relating to operating conditions, which could be learned only by actual experience.

The price situation in the gasoline market is still regarded as satisfactory by executives, but it is not in as good shape as two or

three months ago, due to unfavorable weather and increasing crude production. The wholesale gasoline markets have been particularly steady to date, which is considered a good sign as these are almost immediately susceptible to changes in the crude situation.

One trend noted in marketing is the increasing importance of the wholesale market, as a result of establishment of larger truck and bus fleets, together with increasing use of gasoline by municipal, county, state and federal agencies.

Most of the methods used in marketing gasoline at wholesale and retail and the practices which have arisen, have been the outgrowth of the natural evolution of a relatively new industry. New conditions and new situations have constantly developed, and the various wholesale, jobbing, and retail organizations have merely attempted to adjust themselves as best they could. Naturally, uneconomic practices have crept in, but the industry has endeavored to cooperate to serve the public, as best it could.

The approaching federal grand jury investigation of charges by the department of justice involving companies engaged in marketing, coming in a presidential year, may receive more than average attention by the consuming public. Reports that complaints have been made that forecasts of demand by the Bureau of Mines tend to foster monopolistic practices, and discourage refinery runs, recall that under NRA, it was proposed to definitely restrict refinery runs in each district, in accordance with estimates of demand made by the government, for the purpose of stabilizing the markets and eliminating uneconomic competition. The present practice of the Bureau of Mines in making periodic forecasts of consumption is regarded as constructive by many oil marketers. It is believed that the investigation will require one year or maybe two years to complete.

Magnetic Storm

Tucson, Ariz. observatory of U. S. Coast and Geodetic Survey report a severe magnetic storm began April 17 at 3 p.m. (C.S.T.) and ended April 23 at 6 p.m. (C.S.T.).

James B. Berry Sons Co. Victor in Litigation Over Patents

Judge R. M. Gibson of the U. S. District Court for the western district of Pennsylvania last week rendered a decision in favor of the defendant in the suit brought last year by the Standard Oil Development Co. (Standard of New Jersey) against James B. Berry Sons Co. involving alleged patent infringements in the operation of the latter's refinery located at Oil City, Pa. The suit attracted wide attention when filed because it was felt that if the plaintiff company's claims were upheld it would result in numerous suits against other refiners based on similar claims.

The two patents involved in the suit against the Berry company were: First, Loomis U. S. 1,756,032 covering a pipe still and tower and second, Loomis and Lewis U. S. 1,746,198 applying to vacuum distillation and rectification of paraffin distillate. Considering the Loomis operation as for a single pipe still bubble tower unit, the oil passes rapidly through hot coils where it is heated sufficiently to vaporize that portion which it is desired to remove as distillate and also enough of the balance to serve as reflux in the rectification column. This hot oil is discharged into an intermediate zone of the tower, at the bottom of which steam is admitted. The interaction between falling condensate and rising vapors give the desired separation. The products of each pipe still bubble tower unit are a distillate and residue.

The Berry company was charged with infringing because of the operation of two pipe still bubble tower units connected in series, the first known as a Foster-Wheeler unit operating at atmospheric pressure and the second a Badger unit operating under vacuum, the operations closely paralleling the Loomis patent disclosures.

Evidence was introduced showing that claims of the Loomis patent were taken from Hunneman patent U. S. No. 1,676,609 by permission of the owners, Standard Oil Co. of Indiana, seven years after filing the first application and four years after the inventor had observed the operation of a still similar to the Peterken U. S. patent No. 1,709,874 in the yard of the Atlantic Refining Co. All of the involved elements were claimed to be old in the petroleum art as disclosed in a number of patents, including Frasch U. S. 845,735, Bergstrom 1,271,654, Koppers 1,323,396, Primrose 1,348,606. Prior use was shown by the Shell company operation at Martinez, Calif., and the Fuqua topping plant at Fellows, Calif. Also, more than two years before issuance of the Loomis patent the Foster-Wheeler Corp. had installed a number of units substantially like the Berry's atmospheric unit. The defendant's operation varied from Loomis' specifications in that the first unit puts out a plurality of distillate streams and does not add heat in the first unit by hot oil returned from the second unit to the bottom of the first. The patent was held not to be infringed.

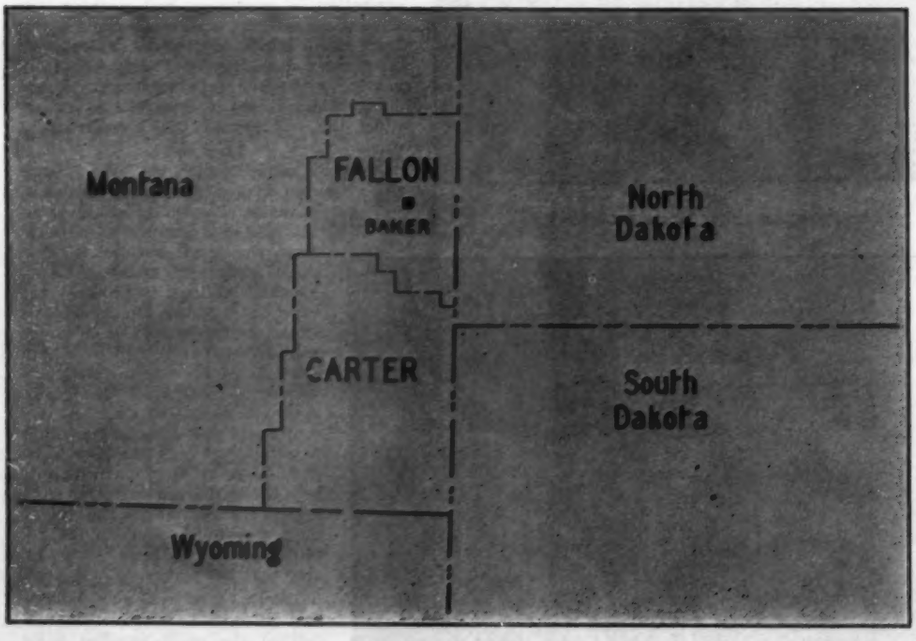
The Loomis and Lewis patent contained claims covering the yields of pressable paraffin distillate after separating lower boiling fractions from lubricating oil by heating the charge to vaporization and rectifying the vapor under vacuum. A shell still with columns both operating under 30 mm. of mercury to permit a maximum still temperature of 640° F. was specified but a unit of this type was never put into commercial use. Patents cited against this included: Loomis, 1,756,032; Christman, 1,009,049; Koehler and Link, 1,084,016; Von Groeling, 1,327,184; Tweddle, 99,975.

The Loomis and Lewis patent presented a combination of tools long known such as chiller, fractionating tower, filter press and distillation under vacuum. The Tweddle patent, issued in 1870, discloses the same object and method as Loomis and Lewis. The defendant heats its oil above 700°. It was held that the heating under vacuum was a mere engineering expediency, long known which constituted no vital features of invention. This patent is held not infringed. Certain claims in both patents were held invalid. The bill of complaint will be dismissed.

Gilliland Acquires Plant

GLADEWATER, Tex., Apr. 27.—The Arp, Tex., cracking plant of the McMurray Refining Co. was acquired today by the Gilliland Refining Co. The consideration was not made public. The plant, of 4,000 bbls. capacity, is operating again following a shutdown.

NORTH DAKOTA HOPEFUL ON MONTANA TEST



Oil has been found in a wildcat test in southeastern Montana, one-fourth mile from the North Dakota line, at the Montana-Dakota Utilities Co. No. 1 State, in section 17-4n-62e, Fallon County.

The cuttings showed saturation from 6,735 to 6,797 feet, total depth, indicating a considerable pay horizon. The hole filled up 4,500 feet with black oil, through 3-inch choke, in 30 minutes on drill stem test April 21. It then was shut in. The oil was 27 gravity.

The pay horizon was said to be in the Madison lime, of the Mississippian formation. The test is on the Cedar Creek anticline, straddling the state line, with 40,000 acres of the block in Montana and 25,000 acres in North Dakota. Terms and boundaries of a unit for cooperative development of the area surrounding the well have been approved by the U. S. department of interior, according to a report from Marmath, N. Dak., a town 19 miles from the well.

OBITUARY

A. F. LANIER, 48, Shreveport, La., president of the Sultana Drilling Co., which he organized in 1923; vice president of the Sultana Oil Corp., and vice president of the Lanier-Wheless Corp., died Saturday.

ANDREW JOHN SPEARS, died suddenly at his home in Jenks, Okla., last week. He had drilling operations in Oklahoma, East Texas and Mexico, and had been in the oil business since 1910.

RALPH L. MOHLER, 46, chief clerk in the executive department of the Sinclair Prairie Pipe Line Co., Tulsa, died April 27. He had been connected with the Sinclair companies for 15 years. He was born in St. Joseph, Mo.

DR. E. R. RIGGS, 62, oil operator of Graham, Tex., died April 19. He was born in Sullivan, Ind., going to Texas in 1925, operating in Loving County and discovering the Larimore pool in Young County, Tex.

California Will Not Join Oil Compact Because of Isolationist Attitude

By L. P. STOCKMAN

LOS ANGELES, Calif., Apr. 25.—California, due to its large potentiality and present ability to produce crude oil far in excess of normal demand, occupies a prominent position in the national spotlight. Lack of regulatory control measures has thwarted concerted attempts to effect stabilization with the result that each new discovery has been prominently manifested in production curves. This increased output has in many cases exerted a very pronounced effect on shipments of crude and refined oil to foreign and domestic ports to the detriment of those previously meeting this demand. Conditions in California at present do not differ materially from those existing during the past decade except for the fact that there are no new major fields in the ascendency that might change the national picture over night. It has been some time since prospectors have opened new prolific fields, but it is safe to say, in view of the large amount of untested potentially productive acreage, that this condition will not prevail for an indefinite period. Sooner or later some successful pioneer will locate a new field of primary importance and we will again be faced with a repetition of uneconomic development unless the acreage is held in large blocks by conservative operators. It appears very doubtful, however, we will ever be faced with conditions similar to those prevailing in 1923 and again in 1929, when Long Beach, Santa Fe Springs and Huntington Beach were undergoing simultaneous development.

As the situation stands at present, it appears probable deep zone development will be of considerable importance during the next few years. This is of paramount importance in view of known undeveloped zones in existing fields and the geologic expectation that other potentially productive horizons will be found in present productive areas. This is particularly true of Los Angeles Basin fields, where in several cases the Miocene has only been tapped or where rocks of this age have only been penetrated for a limited depth. Santa Fe Springs, Long Beach and fields located along the Newport-Beverly sheer zone are especially susceptible of deeper drilling and the outlook is favorable for substantial production. This is of special interest because simultaneous development of these deep zones would precipitate another intensive town lot drilling program, which might result in the production of an excessive amount of crude within a limited period.

California has consistently refused to join the interstate compact. There never have been any tangible premises upon which to base expectation that California would ever join the interstate compact and the expectancy is just as remote today. Progressive operators, who are looking ahead for 10 or 15 years, are heartily in favor of the program, but the rank and file of producers and attitude of the public at large precludes any official sanction. Governor Merriam of California has on several occasions sent delegates to attend meetings of signatories to the interstate compact, but to all intents and purposes this has been merely a gesture of good will and recognition of a compact that deserves the undivided support of all progressive oil producers. California, however, is definitely out of the picture, as several representatives have told the executive committee of the American Petroleum Institute for the past several years. Refusal of California to join other members of the interstate compact does not mean, however, that operators in general are opposed to the compact in principle. This action merely indicates they approve an isolationist attitude to the extreme degree predicated on the premise that they are better masters of their own destines. This is rather provincial but at the same time California's record from a curtailment standpoint is exemplary as far as effectiveness is concerned.

Reserves Declining

Prospectors, to maintain California's position as a major oil producing state and provide adequate crude reserves, must discover approximately 200,000,000 bbls. of new production annually. Due to unsuccessful exploration work during the past several years, prospectors are now faced with the problem of discovering about 300,000,000 bbls. of new production annually for the next three or four years to make up for lost time. California's crude reserves are being depleted and have been severely reduced during the past several years. The inability of operators to discover new prolific fields is of great concern to refiners and marketers and executives of major companies are showing considerable anxiety over future production. No impending shortage of crude oil is expected in the immediate future but within three years the situation will be acute unless additional discoveries are made.

Widespread Search

Recognizing the necessity of discovering new fields, prospectors are engaged in the most widespread search ever instituted in California. Geophysical exploration is being relied upon in a great many instances and this work may ultimately be productive. Several dry gas fields have been discovered through geophysical exploration, but it has yet to find a new oil field. A recent check showed California operators had 26 geophysical parties working throughout the state and every indication points to a continuance of aggressive exploration. Barnsdall Oil Co. will probably keep at least one crew busy for several months as the company has leased more than 100,000 acres of potential oil land in San Luis Obispo County west of the McKittrick field and will conduct a comprehensive survey to determine the most advantageous locations for wildcats. Continental Oil Co. recently discovered a new oil field in the Javon area of Ventura County about midway between the San Miguelito and Rincon fields but the extent and productivity of this district is conjectural due to the absence of any tangible evidence of an extensive structure.

Drilling operations in California during the current year indicate the probability that 1936 will be the biggest year from a development standpoint since 1930. Drilling operations during the past decade reached the lowest point in 1932 but since each succeeding year has shown an increase and 1936 is not expected to prove the exception. In contrast with conditions during peak development, especially in 1923 and 1929, drilling operations at present are not centered in a limited number of fields but include practically every field in the state. This aggressive development program has prevented state production from declining to where curtailment measures would no longer be required. San Joaquin Valley fields will continue to sustain the largest amount of new drilling and this area, from which most of California's future production must come, will be minutely explored during the next several years.

Batch agitators in Richmond refinery, Standard Oil Co. of California

The situation confronting the California oil industry at present is complex and is not limited to crude oil curtailment. Effective curtailment of production is necessary to alleviate storage conditions and is imperative to market stability. The refined oil market, after an extended period of low prices, appears to be temporarily stabilized but, unfortunately, destructive factors are again in evidence. Major companies have agreed to purchase a considerable portion of the distress gasoline that has been hanging over the market for some time and this should alleviate conditions during the next several months. The price to be paid approximates 6 cents. Based on precedent, it is assumed refined oil prices on the Pacific Coast will decline later this year as no great change has been made in the picture and the same unethical marketing practices are again being pursued. Chiseling will continue and grow in importance until a definite resistance is met and when this point is reached the market is ready for another toboggan slide. It is the consensus of opinion among marketing executives no permanent improvement can be anticipated until secondary outlets have been eliminated. Fuel oil prices, in contrast with erratic quotations on motor fuel, have remained relatively stable and the demand has kept pace with expectations. Gasoline sales during March, 1936, were 36 per cent higher than during March, 1935, and the gallonage has been exceeded only on one other occasion.

Oklahoma City Is Defeated in Suits to Limit Drilling Zones

The municipality of Oklahoma City has been defeated on practically every count in its fight to prevent the extension of drilling to include all of the east side, and Tuesday it appeared as though the city council would yield to demands of extensionists and place exclusive Lincoln Terrace on the ballot for the May 12 election. Smarting under three successive Supreme Court decisions adverse to the city's efforts to limit drilling, City Manager Orval Mosier said petitions seeking inclusion of Lincoln Terrace in the drilling zone show a majority of the property owners favor placing it on the May 12 ballot. In petitions presented to council, 197 lots in the exclusive district were represented on petitions favoring extension, 80 lots on petitions opposing extension and owners of 87 lots were noncommittal.

The first of the Supreme Court rulings denied the city's application for temporary injunction to prevent drilling on state lands surrounding the state capitol. The city lost its second round to prevent drilling outside the oil zone boundaries Monday when the Supreme Court refused to halt the K. & L. Oil Co.'s "outlaw" well on the Harn tract south of the capitol. The third ruling came when the Supreme Court refused to stay a district court injunction forbidding the city to interfere with two wells being drilled by Fairfax Petroleum Co. on a 3-acre tract north of the capitol in alleged violation of city regulations.

Drilling was resumed at the well on the Harn tract a few minutes after the court action. This was followed by a statement of Governor Marland that the state would drill two wells on the west side of Lincoln Boulevard, southwest of the capitol, offsetting the K. & L. operation. The state previously had reversed its position against drilling on state hospital land, and requested the city council to abolish the buffer zone around the state tract, placing all the property on the May 12 extension ballot for admission into the drilling zone. The university board of regents planned to meet May 11 to determine a definite policy governing oil development on state hospital property. Governor Marland withdrew the national guardsmen from the state capitol grounds after the Supreme Court refused the city's plea to halt drilling of state wells, although keeping his decree of martial law in force for emergencies.

The fight over Lincoln Terrace remained the big issue. Al Patterson, independent operator, of Dallas, Tex., was reported planning to drill in Block 10, Lincoln Terrace, immediately south of the state historical building, regardless of action of the city council. He would proceed on the grounds used by the K. & L. Petroleum Co. in drilling on the Harn tract, it was said. Property owners opposing extension of drilling to the Terrace have employed Charles Swindall, former Supreme Court justice, to lead their fight. If Lincoln Terrace is put into the oil zone, they propose to sue every company drilling and every property owner who permits his property to be used for drilling. Mr. Swindall also was expected to bring suit to prevent the city from putting Lincoln Terrace, Howe's State Capitol, Howe's Second Capitol and Classen's North Highland Park additions on the May 12 ballot.

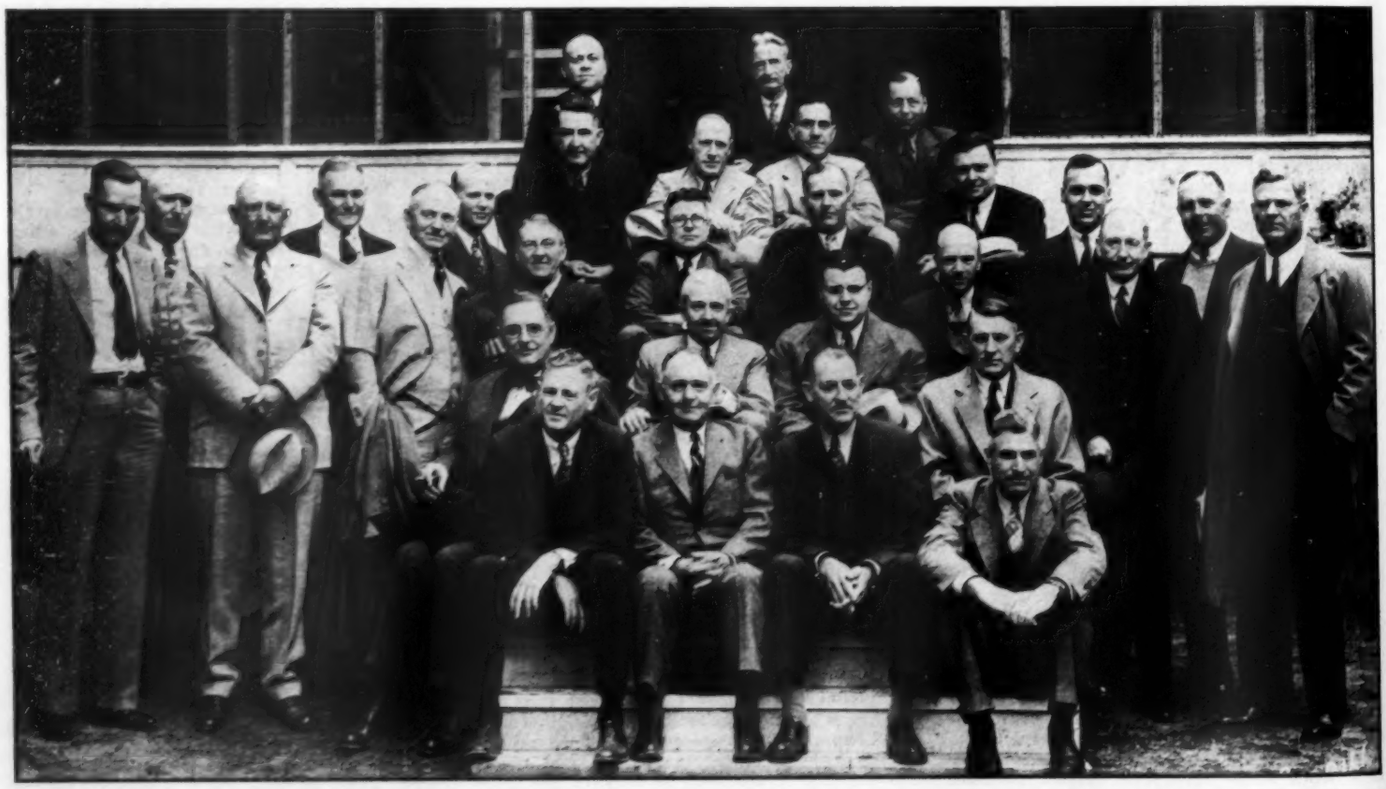
It is believed the extension ordinance will be approved by the voters May 12, whatever the final form the ordinance may take.

Los Angeles Basin A.P.I. Chapter

LOS ANGELES, Calif., Apr. 27.—The Los Angeles Basin chapter of the Division of Production of the American Petroleum Institute will hold its next regular meeting on Tuesday evening, May 12, in the Shell Oil Co. recreation hall, corner of Hill and Obispo Streets, Long Beach.

The program will include talks on "Methods of Locating Water in Oil Wells" by R. C. McCurdy, Shell Oil Co. of California, and "The Interrelationship of the Natural Gasoline Plant and the Production Department" by Howard Cole, Texas Co.

SOCONY-VACUUM AND MAGNOLIA PARTY INSPECTS RODESSA FIELD



Seated, first row, left to right: R. W. Norton, Shreveport independent; A. E. Corwin, New York, vice president, in charge of production, Socony-Vacuum; C. R. Swank, superintendent, Shreveport district, Magnolia Pipe Line Co.; and C. R. Bates, sales manager, Shreveport district.

Second row: J. A. Brown, New York, president, Socony-Vacuum; S. A. Thompson, Dallas, chief geologist, Magnolia; Robert Seigel, New York, secretary, executive committee, Socony-Vacuum; and D. A. Little, Dallas, president, Magnolia Petroleum Co.

Third row: F. S. Fales, New York, vice president, Socony-Vacuum; A. A. Mason, Shreveport, lease department, Magnolia; C. L. Gladden, Dallas, vice president and assistant manager of production, Magnolia; and Harold Sheets, New York, vice president, Socony-Vacuum.

Fourth row: F. N. Wilson, Longview, district superintendent of production, Magnolia; J. A. Selby, El Dorado, lease department; Paul E. Nash, Shreveport, geologist, Magnolia; and D. V. Carter, Dallas, chief petroleum engineer, Magnolia.

Top row: H. B. Clifton, Shreveport, superintendent of production, Magnolia; C. N. Black, Shreveport, manager production, Louisiana-Arkansas, Magnolia; and T. A. Swenson, Tyler, lease department, Magnolia.

Standing, at left, first row: J. B. Wells, Kilgore, district superintendent of production, Magnolia; John Courtney, El Dorado, superintendent of production in Arkansas, Magnolia; and M. J. McLaughlin, Dallas, vice president, manager production, Magnolia. Standing, left, back row: Lee Hancock, superintendent of pipe line, East Texas, Magnolia; G. V. Holton, New York, general counsel and vice president, Socony-Vacuum; and L. B. Williams, Marshall, sales department, Magnolia.

Standing at right, front row: L. L. Marcell, Kansas City, chairman board, White Eagle division, Socony-Vacuum; and W. M. Maddox, Dallas, traffic manager, Magnolia. Back row: Brewster Jennings, New York, director, Socony-Vacuum; and Wilbur Burt, New York, vice president in charge of manufacturing, Socony-Vacuum.

Growth of Diesel Transportation Is No Menace to the Market for Gasoline

By JOSEPH GESCHELIN
Detroit, Technical Editor, Automotive Industries*

Perhaps no single development in recent years has so perplexed the petroleum industry as the continued growth of the high-speed diesel engine in the transportation field. Having attained a high of over 17,000,000,000 gallons of gasoline consumed in 1935, will the petroleum industry find it necessary to change its entire economy and production facilities to accommodate an alarming shift from gasoline to fuel oil? Or is it merely a matter of providing for a nominal increase in the production of new products?

Personally I see nothing revolutionary or startling in the near future despite the fact that some people are talking in terms of dieselizing passenger cars and certainly all motor trucks.

Fuel Economy

After all almost the only justification for the diesel engine is fuel economy. The gasoline engine still remains supreme in its position as a splendid performer with ample power and unquestioned durability, noted as well for its freedom from service troubles. Moreover its development is not at a standstill which means further improvements and refinements will come as a matter of course. The diesel must rest on its inherent economy and so long as it costs considerably more it must justify its existence by paying for the added cost out of fuel savings within a reasonably short period.

So far as the petroleum industry is concerned there seems to be nothing very alarming in the future picture. All the motor trucks registered in the United States consume about 26 per cent of the gasoline consumed by vehicles. If all motor trucks were to become dieselized over night—not a very tenable premise—that would be the extent of the influence on the gasoline market. Suffice it to say that for the present only about 1 per cent of the market may be considered as being in the picture.

Published records of fuel economy from operators all over the world and including recent experience in this country indicate the diesel is cutting fuel costs from 60 to 80 per cent—the variations being due to difference in operating conditions as well as differences in the cost of fuel. This means fuel cost ranges from 25 to 40 per cent of gasoline cost but already this discrepancy has been leveled by imposition of fuel tax in many states.

In fact, ultimately we must face the issue that the fuel economy must be reckoned in terms of the inherent efficiency of the diesel, rather than on the basis of lower fuel cost, since the cost of specification fuel oil is bound to approach that of gasoline. The ultimate fuel tank economy is close to 50 per cent in favor of the diesel.

Theoretically, the diesel cycle exceeds the thermal efficiency of the Otto cycle by about 25 per cent; actually, the operating experience all over the world proves that diesel-equipped vehicles are giving almost twice as much mileage per gallon, the intrinsic economy on the basis of fuel-tank volume running about 30 to 50 per cent in favor of the diesel. A reasonable explanation is that the diesel engine has a much flatter fuel consumption curve; and, since many vehicles are operated at part throttle for a great deal of the time, the over-all economy is almost twice as high as the theoretical thermal efficiency may indicate.

Another decided advantage, the diesel power plant runs much cooler, at lower radiator temperatures, due to more efficient burning of the fuel and, consequently, less rejection of waste heat to the water jackets. This is particularly advantageous on tractor and industrial equipment; as it makes possible use of smaller, lighter, cooling systems, and eliminates troubles due to overheating when operating under full-load conditions in a hot atmosphere or where the direct entry of atmospheric air is blocked.

Limiting Factors

The controlling element, by far, is the present high cost of diesel power compared with the available gasoline power plant. You have to reckon not only the high cost of the engine but the added cost of accessories such as starter, generator, and large battery, as well as higher installation costs.

Since the diesel is sold on the basis of economy, it is necessary to confine its applications to places where fuel saving alone will amortize the extra costs within a relatively short period. Up to the present applications in the truck field have been limited to vehicles hauling right up to the gross weight limitations in various states. And even in this category the diesel has been restricted to vehicles covering no less than around 30,000 miles per year.

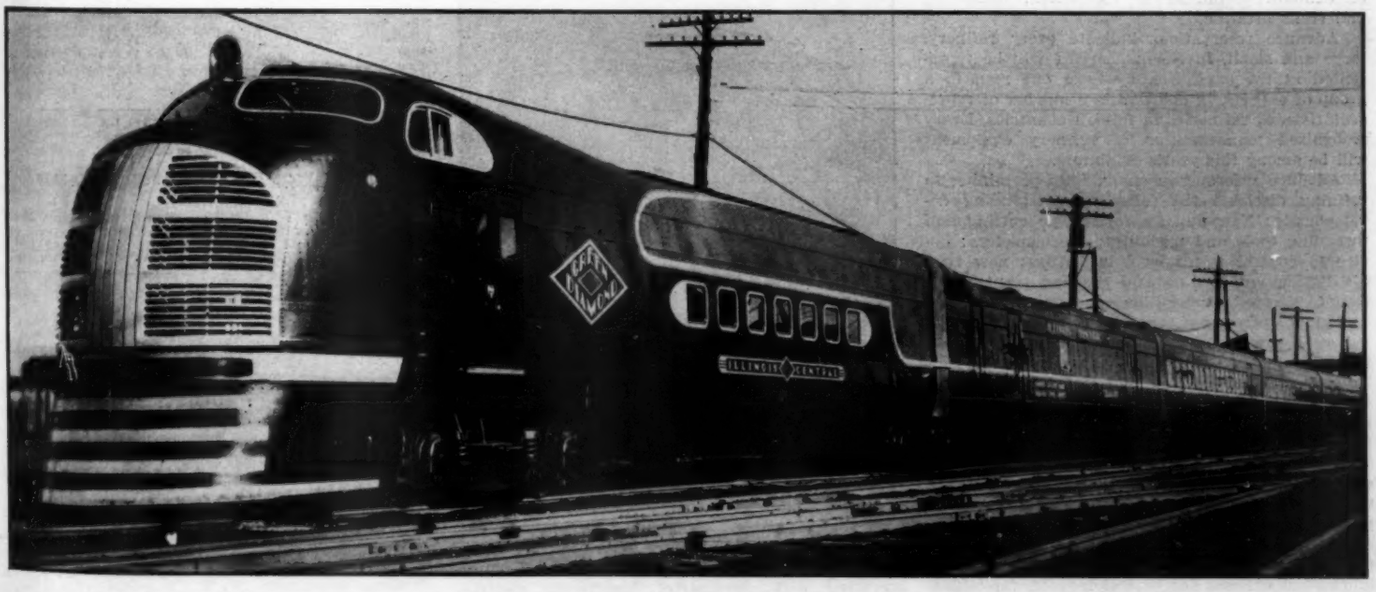
It is difficult to credit reports that diesel power may be found soon on all motor trucks or at least on the great mass of units in the range of capacity from 1½ tons and upward. Nor does it seem in the cards that even heavy duty vehicles running only 15,000 miles per year can justify diesel power. Yet it is a fact many motor trucks cover from 200 to 450 miles a day on regular schedules and such vehicles should justify diesel power.

Fuel Situation

There seems to be very little danger of even a mild upset in the refiners' fuel economy. Motor trucks account for but 13 per cent of all vehicle registration; and only 5 per cent is in the range of capacity of 2½ tons and upward. We face only the probability that about 1 per cent of motor vehicle registrations may require a diesel fuel, and even that eventuality seems far in the future.

We can even make some fairly close estimates of actual fuel requirements for the changing motor truck picture. About 17,750,000,000 gallons of gasoline were consumed in the United States during 1935. Only those vehicles rated 2½ tons and upward may be dieselized in the limit. This class represents from 5 to 6 per cent of total registration and around 5 per cent of total gasoline consumption. On the other hand, the added requirement of fuel oil would be substantially less than the shrinkage in gasoline consumption since diesel

*Extracted from address on "What Is the Future for the High Speed Automotive Diesel in Industrial and Transportation Equipment"? Before National Petroleum Association, Cleveland, Ohio.



Illinois Central's new streamlined "Green Diamond," a five-unit train powered by 1,200-horsepower diesel engine

vehicles, on the average, make a gallon of fuel oil go almost as far as 2 gallons of gasoline.

Fuel Cost and Tax

Up to about two years ago the probable course of fuel oil prices was a matter for conjecture. Commercially available furnace oils were considered perfectly satisfactory and were to be had at relatively low prices and tax free. However, the tax on fuel oil used for road transportation vehicles is now almost universally applied; 30 states now impose a fuel tax while Utah takes a toll of 1½ cents per operating mile on diesel-equipped trucks and Vermont has raised the registration fee so diesels will pay just twice as much as gasoline vehicles. In Massachusetts the oil is taxed 5 cents a gallon against 4 cents for gasoline.

A table showing the prevailing fuel prices in a number of sections was prepared by Dr. J. C. Geniesse of the Atlantic Refining Co., who said that generally the tank-wagon price runs about 2 cents less than service station price. On this basis in Philadelphia gasoline would be 17 cents compared with furnace oil at 11½ cents while in Chicago the comparison would be 14½ cents for gas and 11 cents for oil.

However, tankcar prices are in general more nearly close together than retail prices indicate. In addition we know that as the diesel movement gains momentum neither the furnace oil nor the diesel oil as known today will be considered satisfactory and already much pressure is being brought to bear on specification fuels for the automotive diesel. If and when specification fuels are generally available, the wholesale price of such fuels probably will be practically the same as that of gasoline and the buyer of tank-wagon lots of specification fuel oil will pay as much for the oil as for gasoline. At least that seems most probable.

At the moment, fuels suitable for use in automotive diesel engines are not generally available in every section. Generally the use of diesel power must be confined to operators who have regular routes, who can plan sources of fuel oil supply along their routes, and who can contract for at least tank-wagon lots. For the time being this eliminates the small user. The problem of distribution will be made still more difficult when specification fuels are in regular use, since only certain refiners will produce such fuels, the problem being one of economics.

Specification Fuels

In the early beginnings of the diesel movement, users took whatever fuel oil was available—generally fuel oil No. 1 or No. 2 or even the product sold as diesel oil. However, it was recognized that the high speed diesel engine required a better product, more highly refined, and certainly cleaner than the available fuel oils.

While specification diesel fuels still are in the formative stage, technical committee "C" of the A.S.T.M. subcommittee D-2 has proposed a tentative classification of refined diesel fuels which will be found in Appendix 3 of the A.S.T.M. standards on petroleum products and lubricants, September, 1935. Fuel 1-D and 3-D are considered an indication of the desirable specifications for automotive diesel engines, although their use has not been universally adopted

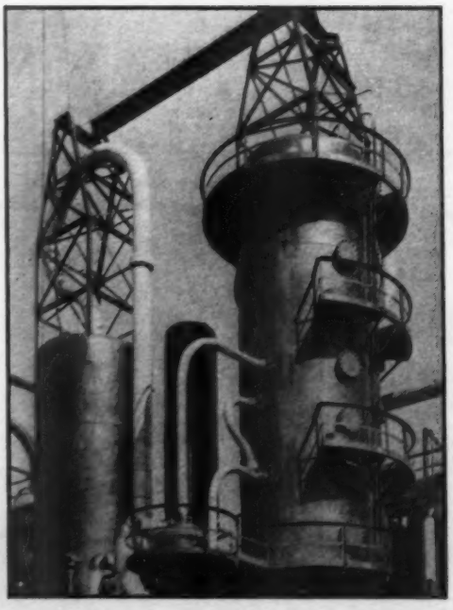
From a practical point of view fuels 1-D and 3-D are not generally available in most parts of the country, and yet even now these people who are working on specification fuels feel that the A.S.T.M. fuels recommendation can be greatly improved. For this reason, the manufacturers of diesel engines and dieselized equipment find it necessary to make definite recommendations to their customers, taking into account the need for compromising on any available fuels that may be considered satisfactory even though they may not be ideally suited

Refining Industry Equipment to Be Feature at Oil Exposition

The greatest display of new and improved measuring instruments and automatic control devices for the refining industry ever exhibited will be seen at the Ninth International Petroleum Exposition in Tulsa, May 16 to 23. More than 200 firms will display refining equipment, in addition to hundreds of exhibits pertaining to production, marketing and transportation.

Advance reservations indicate every refinery, large and small, in North America will be represented at the exposition by from one man to a group of experts, in addition to a number of representatives of refineries in foreign countries. Every recognized manufacturer of refinery equipment will be among this year's exhibitors.

Advance information on exhibits pertaining to refining discloses the following outstanding developments: New and improved pipe cutting and threading tools and machines; thermometers; device to control water level in boilers; new type distillation unit for natural gasoline plants; balloon to prevent evaporation on groups of storage tanks; a refractory concrete; diaphragm motor valves; a new chemical measuring pump; improved tube cleaners; return bend fittings for heating coils; refractory coating material to be sprayed on burned-out fire brick; tellurium chemical sheet lead which toughens under vibration; potentiometer stabilog, first equipped with chart and pen to record control deviations and new remote valve control which permits accurate manual adjustment on far away air-operated valves from a central panel board; new superfractionator; new air-operated equipment for full automatic control of temperature pressure and flow and liquid level; new lubrication systems for explosion-proof, fan-cooled electric motors; New automatic time switches; new



pump for handling propane and mixtures of propane and ethane at low differential pressures, but with high discharge and suction pressures; new air hose designed to overcome deteriorating effects of hot oil; miniature plunger reciprocating pump operating with one-quarter horsepower electric motor.

Crude Estimate Up 10 Per Cent Gasoline 8 Over Year Ago

The daily average production of crude for May, 1936, recommended by the Bureau of Mines to meet the estimated demand, is 2,826,300 bbls., an increase of 29,000 bbls. above the recommendation for April and 265,100 bbls., or 10 per cent, above the allowable of the federal agency for May, 1935. The increase reflects chiefly the seasonal gain in gasoline consumption.

Motor Fuel

The domestic motor fuel demand for May is estimated as 42,420,000 bbls., a daily average of 1,368,400 bbls., an increase of nearly 8 per cent over May, 1935.

Stocks of finished and unfinished motor fuel on February 29 were 71,604,000 bbls. By March 31 they had increased to 73,182,000 bbls., highest recorded. It is recommended that 3,100,000 bbls. be withdrawn in May.

Gasoline Production—Motor benzol and "direct" sales and losses of natural gasoline have been estimated at 900,000 bbls. The addition of exports, deduction of the stock decrease and the item of 900,000 bbls. gives 40,520,000 bbls. as the required production of finished and unfinished gasoline in May, 1936. This is distributed as follows (thousands of barrels): East Coast, 6,640; Appalachian, 1,650; Indiana-Illinois, 6,620; Oklahoma, 2,770; Kansas-Missouri, 2,490; Texas inland, 3,140; Texas Gulf, 8,100; Louisiana Gulf, 1,610; Arkansas-Louisiana inland, 1,000; Rocky Mountain, 930; California, 5,570.

Crude Petroleum

Runs to Stills—The estimate of the percentage of natural gasoline used by refiners to the total production of gasoline has been reduced from 6.0 in April to 5.5 in May in accordance with the seasonal decline. The estimated yield of cracked and straightrun gasoline has been raised from 44.40 per cent in April to 44.51 per cent in May. Applying the latter to the total refinery gasoline gives 86,030,000 bbls. of crude required for runs to stills.

Stocks—Provision has been made for withdrawal of 65,000 bbls. daily from crude stocks, 10,000 bbls. more than the average recommended for April, but about equal to the daily average withdrawal in 1935.

RECOMMENDATORY LEVELS OF REQUIRED CRUDE OIL PRODUCTION BY STATES

(Daily averages in barrels)

State—	April, 1936	May, 1936
Texas	1,122,800	1,132,500
California	552,600	*544,000
Oklahoma	525,000	538,300
Louisiana	160,900	170,500
Kansas	146,000	150,100
New Mexico	63,200	65,900
Pennsylvania	44,300	43,000
Michigan	41,000	38,200
Wyoming	34,300	35,600
Arkansas	30,500	31,000
Kentucky	14,400	13,900
Montana	12,300	12,900
New York	11,100	11,800
Illinois	11,000	11,700
Ohio	10,300	10,500
West Virginia	10,000	9,900
Colorado	4,100	4,400
Indiana	2,000	2,100
Total	2,797,300	2,826,300

*This average applies only to May, 1936.

SUMMARY OF FORECASTS FOR MAY, 1936

(Barrels)

	April, 1936	May, 1936
Demand for motor fuel:		
Domestic demand	38,680,000	42,420,000
Exports	2,800,000	2,100,000
Total demand	41,480,000	44,520,000
Supply of motor fuel:		
Straightrun and cracked gasoline production	33,530,000	36,290,000
Natural gasoline used at refineries	2,230,000	2,230,000
Total refinery production	35,760,000	40,520,000
Benzol and stabilized natural	940,000	900,000
Recommended decrease in stocks	1,780,000	3,100,000
Available supply	41,480,000	44,520,000
Crude oil requirements:		
Per cent yield of gasoline from crude	44.40	44.51
Refinery crude required	82,270,000	86,030,000
Imports	2,800,000	2,800,000
Exports	5,900,000	4,200,000
Fuel and losses	2,200,000	2,200,000
Total demand for domestic crude	85,570,000	89,630,000
From stocks	1,650,000	2,015,000
Required production	83,920,000	87,615,000
Daily average	2,797,300	2,826,300

Wildcat in McCurtain County Testing Possibilities in Southeast Area of Oklahoma

By DAL DALRYMPLE

The southeastern corner of Oklahoma, long dormant so far as oil activity is concerned, attracted attention the other day when one of the wildest of the wildcat tests was spudded in—and Oklahoma oil men are waiting with considerable interest the results at Louis Sikes and others No. 1 Mitchell, C NW SW section 12-9s-26e, a deep test.

The location is in the southeast corner of McCurtain County, the southeastern corner of the state. If it had been moved about 10 miles south it would be in Texas; or if 10 or 12 miles east, it would be in Arkansas. It is on a block of 11,000 acres assembled by Frank Dennis and George P. Bell, of Hugo, Okla. It is to be a 4,000-foot test, but it was said the hole may be carried deeper if geologic conditions are promising.

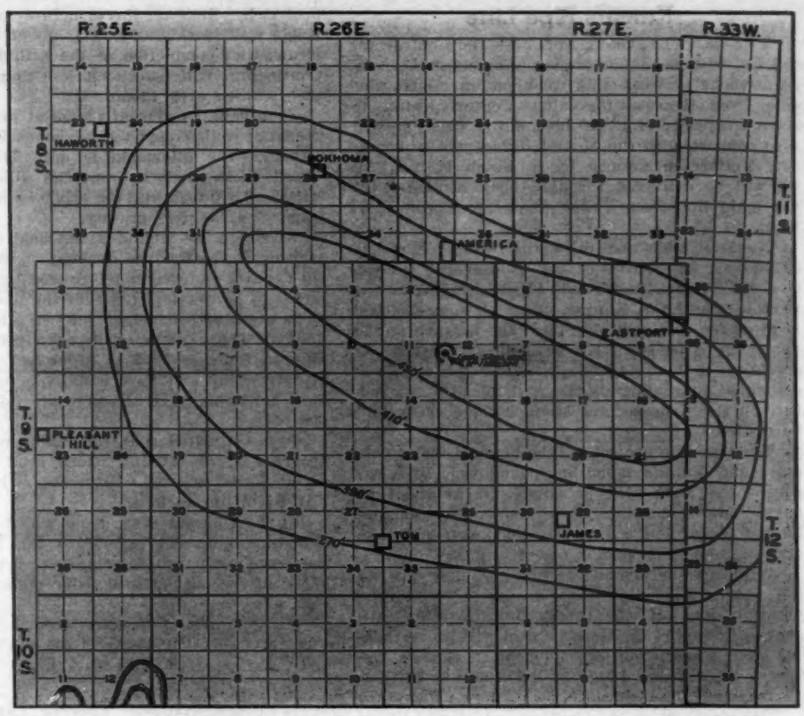
It is on the Bokhoma structure, so named by the late John W. McGee, who geologized the area. The structure, as mapped by Mr. McGee, is a minor fold, paralleling the major mountain uplift. The outcropping formation is the Pecan Gap chalk, giving at least 3,000 feet of Cretaceous strata, containing a number of known sand horizons. The structure is near the north shore line of the old Cretaceous embayment. This, it is said, places the underlying strata in a more favorable position for the formation and accumulation of oil and gas than those that are deposited under deeper marine conditions. Gentle dip of the structure is to the south, with a great distance intervening between its apex and that of the Sabine uplift. This makes for a large gathering basin in that direction, the side from which accumulation naturally would come, according to Mr. McGee's report. It is expected that the sands of the upper Cretaceous will be reached at shallow depths. No. 1 Mitchell is expected to be carried to sufficient depth to test the various Cretaceous horizons.

In an article on Atoka, Pushmatha, McCurtain, Bryan and Choctaw Counties, published in the Oklahoma Geological Survey, Dr. C. W. Honess discussed the geology and stratigraphy of the area in which the new wildcat is located. After spending several years studying the general geology of the Ouachita Mountains, he came to the conclusion it was "useless to drill into the Paleozic anywhere in the eastern half of Choctaw County or anywhere in the southern half of McCurtain County, excepting an area of about 300 square miles in the extreme southern part of the county."

It was his contention that "very little oil would be found in the Comanchean sediments of eastern Choctaw and southern McCurtain Counties excepting in the 300 square miles or so in the extreme southeastern part of McCurtain County." That area includes the Bokhoma structure.

The Pecan Gap chalk and associated shales and sands unquestionably lie across the southern tip of McCurtain County, and are the uppermost beds of the Cretaceous in this region, Doctor Honess said. The chalk generally is concealed from view beneath a thin covering of river silt and sand. The chalk is exposed at Rocky Comfort, in Arkansas, just east of the Oklahoma line. The Woodbine sand, which crops out in southern Bryan and southern Choctaw Counties, comprises in southern McCurtain County the lower part of the Bingen formation. It is the basal formation of the upper Cretaceous and consists of fine brown sand and sandy clays interstratified. The total thickness is about 500 feet. The Trinity sand of the lower Cretaceous crops out in a belt 10 miles broad in parts of central McCurtain County, and it should be found at wells drilled south of the outcrop. Doctor Honess outlined other formations found in the general area covered by his report, some of which might not be found in tests in southern McCurtain County.

Two wells of moderate depth have been drilled in southeastern McCurtain County in the area described as "possible of production," and a shallow or 1,755-foot test has been made of the Smithville anticline. But, so far, no production has been found in the general region. Logs of wells drilled in southeastern Oklahoma, as a rule, are fragmentary and, in the absence of samples, unreliable. No attempt has been made to identify the Paleozoic formations in any of the deeper tests. This lack of information will add to the general interest in the new test in that area—a district now classified as "possible of production."



Map showing southeastern McCurtain, Okla., county area, where work has started on Louis Sikes and others No. 1 Mitchell, wildcat to test the Bokhoma

Barnsdall in Canada

Barnsdall Refining Co., Tulsa, has completed arrangements with Universal Petroleum Co. of Canada, Ltd., which will can and package the Barnsdall line of lubricants and also store and distribute other Barnsdall products in eastern Ontario. The Universal company has taken over an existing plant in Toronto and will expand the facilities. F. L. McCallum, formerly with the Sinclair Refining Co. of Canada, is general manager of the Universal company.

Biennial Petroleum Exposition

HOUSTON, Tex., Apr. 27.—A move for establishment of a biennial petroleum exposition at Houston on alternate years with the International Petroleum Exposition at Tulsa on a basis similar to that of the Tulsa show was started at a meeting of oil men and manufacturers of equipment.

A committee, composed of John R. Suman, vice president, Humble Oil & Refining Co.; T. J. Donoghue, vice president, Texas Co.; Chase E. Sutton, division manager, Pure Oil Co.; S. P. Brown, vice president, Hughes Tool Co.; W. L. Childs, vice president and general manager, Reed Roller Bit Co.; E. H. Lorehn, general manager, Cameron Iron Works, and Ray Dudley, Gulf Publishing Co., was appointed to formulate plans for a permanent, non-profit making organization, such as operates the Tulsa exposition. The committee will confer with the management of the International Petroleum Exposition at Tulsa next month.

H. F. Sinclair Broadcasts

Reviewing the growth of the corporation, H. F. Sinclair, chairman of the board, Consolidated Oil Corp., spoke over a nationwide hook-up of 48 radio stations Monday night, April 27. The occasion was the twentieth anniversary of the formation of the Sinclair company for which the Consolidation corporation is now the holding unit.

Mr. Sinclair said the corporation now has 25,000 employes, 8,000 wells and 14,000 miles of pipe line connected to refineries located at scattered points. He spoke optimistically regarding future developments in the oil business.

Federal Grand Jury Convenes

The special grand jury which is to inquire into oil marketing practices was convened at Madison, Wis., Monday, April 27. The taking of testimony will start next week. Several executives of major marketing companies have been subpoenaed as early witnesses. It is believed the investigation will continue over several months. United States Attorney John J. Coyle and several assistants will have charge of the investigation for the government.

Zeppelin Contract

The fuel requirements of the diesel engines of the zeppelin Hindenburg will be supplied by Standard Oil Co. (New Jersey) on the airship's 10 visits to Lakehurst, N. J., beginning May 8. An affiliate will supply fuel in Germany. On each arrival the zeppelin will take on 15,000 gallons of fuel and approximately 1,500,000 feet of hydrogen, the hydrogen coming from the Bayway hydrogenation plant of the Standard.

Pipe Line Activity

Kansas Pipe Line

PONCA CITY, Okla., Apr. 27.—The Continental Oil Co. with headquarters here announce the commencement of work this week on an 8-inch pipe line from Geneseo to Valley Center, Kans., to have a capacity of 14,000 bbls. daily. This line will also connect with the Mound Ridge pool in southern McPherson County by a 4-inch lateral. All oil will be delivered through the Continental Oil Co. main line from Valley Center to Ponca City, Okla.

Need for additional oil at the refinery here has caused the executives of the Continental Oil Co. to decide to spend more than $12,000,000 during the next 18 months in Kansas, of which sum $650,000 is to go for this new pipe line. The balance of the money is to be spent for development of new oil resources in Kansas and producing the oil. It is estimated approximately 300 wells on proven structure in the Geneseo and Mound Ridge areas will be drilled.

The pipe line project will be handled under contract and Kansas labor only employed. It is expected the work will be completed in about 60 days. Pump stations are to be built at Geneseo and Mound Ridge and a complete telephone and telegraph system will parallel the pipe lines.

With announcement of this pipe line project the company also outlines an extensive drilling program, and oil men throughout the Mid-Continent area predict the Geneseo pool will prove to be the second largest oil development in Kansas history, being surpassed only by the Eldorado drilling program of 20 years ago.

"Development of the Geneseo and Mound Ridge area will mean much to general business conditions in the state of Kansas," said President Moran. "We are extremely glad to make the expenditure in this drilling program, as it will assure us an additional supply of high quality crude oil for our Ponca City refinery."

Continental Oil Co. owns leases on more than 21,000 acres in the Geneseo region, almost equal to the area of an entire township. The company has eight producing wells in the area, five wells are now drilling, and there are approximately 200 proved locations on the structure to be drilled. A single well in this area costs about $35,000, which means that completion of the drilling program by Continental will invest not less than $7,000,000 in the Geneseo area alone.

Continental's present potential production from the eight wells completed is about 9,900 bbls. daily, although the allowable is only 719 bbls. daily. These wells produce from the Siliceous lime at 3,180 to 3,300 feet, and the crude is of high quality, being of 41 degrees gravity.

Although the Mound Ridge field does not cover as wide an area as the Geneseo region, Continental Oil Co. has more than 100 proved locations in this sector to be developed within the next year. Eight wells are now producing and two others are being drilled. These eight wells, producing from the Hunton lime at 3,300 to 3,400 feet, yield a high gravity crude and have a daily potential of 5,500 bbls. daily, although the present allowable is only 650 bbls.

It is estimated that completion of the drilling program in the Mound Ridge area will add another $3,500,000 to Continental's investment in Kansas oil production.

In the Burrton area, from which Continental's new pipe line will extend to the Mound Ridge field, the company has an interest in 18 producing wells which have a daily potential of 6,757 bbls.

Continental's allowable production from 37 wells in the Valley Center field is about 900 bbls. daily.

Southwest Texas Lines

SAN ANTONIO, Tex., Apr. 27.—New pipe line outlets for the Saxet, Saxet Heights and Baldwin fields of Nueces County are being projected to carry the increasing production of these fields to the nearby deep water terminals of Corpus Christi harbor.

A 10-mile line will be laid by Potter Pipe Line Co. of East Texas. Right of way has been secured and construction will begin shortly. The system will consist of combination 6- and 8-inch lines extending from the town of Clarkwood eastward to Corpus Christi, traversing the three fields. The oil will be handled in the harbor at the terminal of the General American Tank Storage & Terminal Co. The Potter company is reported to be planning construction of a refinery in this area.

A second smaller line is also being planned to connect the Saxet field with Corpus Christi harbor. It will consist of a 4-inch line to be laid by Republic Pipe Line Co. This company has been utilizing the Corpus Christi storage of the Texas Pipe Line Co. for the crude run in its line from the Plymouth field, but, in line with the ultimate plan, storage will now be erected on the Republic site adjoining the Texas Pipe Line Co. terminal. Two 80,000-bbl. tanks will be built immediately, and the new short line from Saxet as well as the Plymouth line completed last year will terminate there. Increased harbor facilities for the handling of crude and refined products are now available with the completion of a second loading dock for the Nueces County Navigation Commission. These two docks serve tank farms of the General American, Texas Pipe Line Co., Crude Oil Pipe Line Co. and Republic Pipe Line Co.

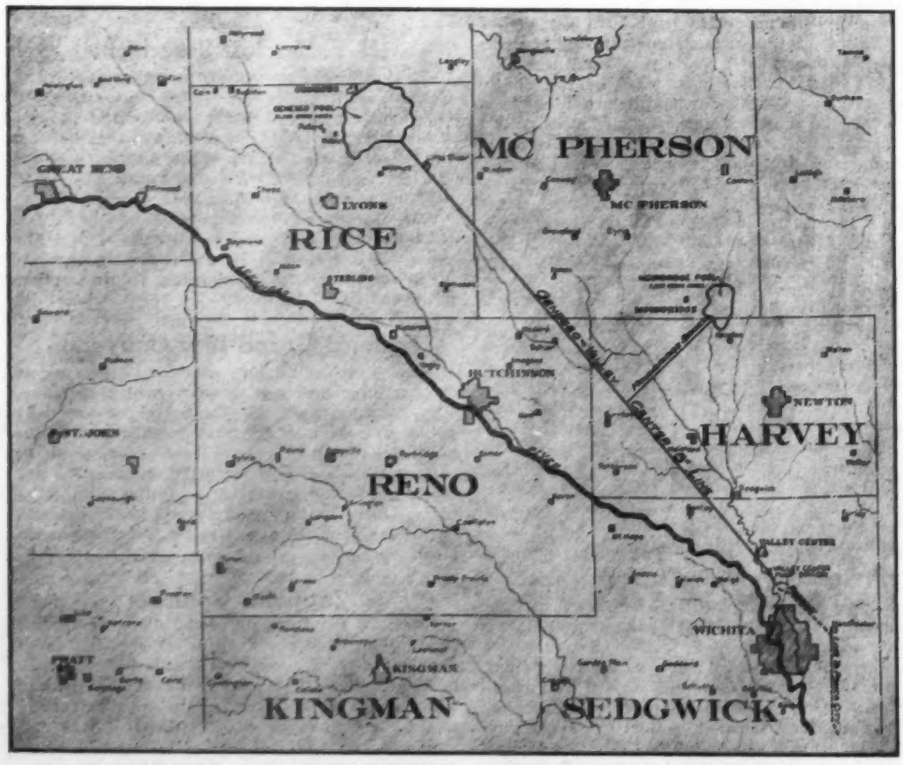
Construction of a 4-mile line connecting McAllen with the industrial line of the Hidalgo Gas Co. is to begin soon. The new line will supply the city with gas from the nearby Samfordyce field of Hidalgo and Starr Counties in the Lower Rio Grande Valley district of Texas. The company secured a 20-year franchise from the city.

Lance Creek Line

DENVER, Colo., Apr. 27.—The 19-mile welded line from Lance Creek to Manville, Wyo., is being completed by Continental Oil Co. It is being constructed of 2-inch pipe and parallels a 4-inch line recently put into operation. The contract was awarded to Sterns Rogers Manufacturing Co. of Denver.

Hendricks-Hobbs Line

FORT WORTH, Tex., Apr. 27.—Gulf Oil Corp., which recently completed an 8-inch oil line from Hendricks, Winkler County, into the Hobbs area, New Mexico, is not to run any oil through this line for some time, turning over its connections to Texas Pipe Line Co. and Shell Pipe Line Co. The latter recently completed a welded 8-inch from Hobbs to its Hendricks field station in Winkler County.



Route of Geneseo-Valley Center pipe line of Continental Oil Co.

Refinery Projects

New Michigan Plant Building

WEST BRANCH, Mich., April 25.—Foundations for the control house, pipe still and fractionating tower of the new Producers Refining, Inc., have been laid in West Branch, Mich. Construction of the kiln of fire brick to house the pipe still is now under way with all equipment due for immediate setup.

The plant has been designed by Roy J. Miller, head of the Miller Petroleum Engineering Co., Chicago, specifically to meet the peculiar qualities of Ogemaw crude.

Kendall to Spend $1,250,000

OIL CITY, Pa., Apr. 28.—Kendall announces the initiation of a construction program which will cost approximately $1,250,000. Program includes solvent dewaxing and deresinating plant, new boiler house and new electricity generating plant. Contract for solvent plant has been let to M. W. Kellogg Co. Boiler house of latest high pressure type will utilize gas, powdered coal or fuel oil. They expect to complete solvent plant in six months and the boiler and electrical installations in 11 months.

Old Dutch Installing T.V.P. Unit

MUSKEGON, Mich., April 27.—Installation of a $200,000 vapor phase unit for Old Dutch Refining Co., Muskegon, by the T.V.P. Corp. is scheduled to be completed in July, it was announced by John Borden, president.

Construction of this unit climaxes a series of plant expansions to boost the capacity of the

$1,000,000 plant to about 5,000 bbls. In addition to the refinery, Old Dutch owns and operates a tank farm and marine terminal with 60,000 bbls. capacity, pipe lines in both Crystal and Porter fields, about 30,000 bbls. of field storage, truck and tank-carloading facilities and a fleet of oil trucks with an aggregate capacity of 25,000 bbls.

Quaker State Altering Plant

BRADFORD, Pa., Apr. 27.—Quaker State Oil Refining Corp. is now starting a program of alterations, additions and repairs at its McKean plant, Farmers Valley, Pa. The work includes the construction of a new dewaxing plant, new boiler house and equipment and electrical generating equipment. The new wax plant, which is to be constructed by E. B. Badger Sons Co. of New York City, will employ one of the most modern methods of dewaxing lubricating oils; that of using methylethyl keytone and benzol as a solvent for the precipitation of the wax.

The boiler house addition will consist of a 1,400-horsepower boiler of the high pressure type, designed for utilizing either gas, fuel oil or powdered coal. The power house installation will include a new feed water treating plant. The construction is expected to require five or six months and will afford employment for a considerable number of additional men.

Industrial Oil Plant

TORONTO, Ontario, Apr. 25.—The Werner G. Smith Co. of Cleveland, Ohio, has leased two acres of land and 30,000 feet of floor space, comprising the main buildings of the former Galena Signal oil plant for the manufacture of industrial oils, chiefly core oil for the foundry industry. The lease covers interior tanks, blending equipment and boilers, and $25,000 of additional equipment will be installed. The purchasing company is a wholly-owned subsidiary and one of the main manufacturing units of the Archer-Daniels-Midland Co. of Minneapolis, Minn. The Canadian Werner G. Smith Co., Ltd., has been incorporated under management of Bruce Ross, president of Bruce Ross, Ltd., of Toronto, Canadian representatives of the company.

New Lethbridge Refinery

LETHBRIDGE, Alberta, Apr. 25.—The Huff Refining Co., headed by Floyd J. Huff, formerly connected with the Regal Oil & Refining Co. at Calgary, has commenced work on a new refining plant here. The building permit calls for an outlay of $20,000. The plant will likely operate on Montana crude.

Inter Lakes Cracking Unit

MUSKEGON, Mich., Apr. 25.—Test runs were started last week in the new cracking plant of the Inter Lakes Refining Co., the third unit to be erected in Michigan. It has a capacity of 1,000 bbls.

Natural Gasoline

New Southwest Texas Plant

SINTON, Tex., Apr. 28.—Plans have been drawn for the construction of the new plant by the Manhattan Gasoline Co., an associate of the Refugio Refining Co. The new plant is expected to be completed within 60 days.

The new plant will be of the low pressure absorption type, with a production of from 7,000 to 8,000 gallons of gasoline daily.

The plant will be located 400 yards south of the Plymouth office in the Plymouth oil field, a few miles from Sinton.

New Southwest Texas Plant

SAN ANTONIO, Tex., Apr. 27.—Construction of a natural gasoline plant in the Plymouth field of San Patricio County, Southwest Texas, is under way by the Manhattan Gasoline Co., an affiliate of the Refugio Refining Co. of Refugio, Tex. The new plant will be of the low pressure, absorption type capable of an output of 7,000 to 8,000 gallons per day. Gas will be supplied from wells of the Plymouth field, and the product will be handled in tankcar shipments by Hanlon-Buchanan, Inc. of Tulsa, Okla.

The plant will be located adjacent to the field office of the Plymouth Oil Co. about 10 miles from Sinton. R. S. Wyrick, general superintendent of the Refugio Refining Co.'s plants will act in that capacity over the new one, John B. Landrey will be superintendent in charge of construction, and D. A. Price will be plant superintendent. The new plant will furnish steady employment for 10 or 12 men upon its completion.

New Rodessa Plant

RODESSA, La., Apr. 28.—The Blackwell Oil & Gas Co. has made preliminary plans for the erection of the small natural gasoline plant in the Rodessa field. The company operates producing properties in Oklahoma.

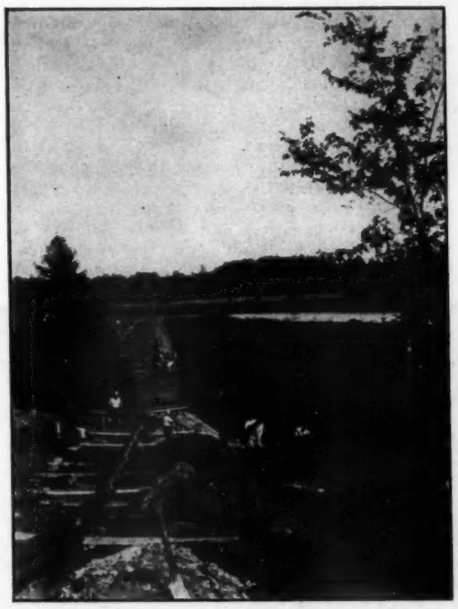
Pelican Plant Nearly Completed

RODESSA, La., Apr. 28.—The natural gasoline plant being built by the Pelican Oil & Gasoline Co. near here is in the final stages of construction and trial runs will be made within 10 days.

Natural Gas News

Canadian Gas Line

To serve the city of London, Ontario, Canada, a 52-mile 10¾-inch coupled gas line was laid during the late summer and early fall of 1935 between the Dawn field in Lambton County, Ontario. In addition to the main line, 14 miles of 8⅝-inch and several miles of 4½-inch line was also laid in this system. To complete this work more than 17,000 couplings were used. The entire 10¾-inch



Union Gas Co. line, Canada

line was connected and buried in the ditch without any pressure test being applied to determine tightness of the couplings.

The line is laid through rolling farm lands of Ontario and has four river crossings between the field and the city. The working pressure is approximately 300 pounds per square inch in the main line which is connected into the distributing mains and equalizing belt lines in the city of London.

This work was completed under the supervision of C. E. Steele, general superintendent of the Union Gas Co. of Canada, and R. L. Bevan, general manager of the natural gas division of the company.

Pennsylvania Gas Association

STATE COLLEGE, Pa., Apr. 27.—Members of the Pennsylvania Natural Gas Men's Association marked up a new attendance record at the joint conference here with the petroleum and natural gas section of the Pennsylvania State College school of mineral industries. There was an unusually large representation of refinery technologists. Joseph E. Moorhead, executive secretary of the Pennsylvania Grade Crude Oil Association, presided at the opening session, while George Welker, president of United Natural Gas Co., served as chairman on the second day in the absence of Samuel W. Meals. Dr. A. W. Gauger, assisted by Dr. G. L. Hassler, prepared the program.

As a conservation measure, to reduce the rate of exhaustion of our crude reserves, and as a means of producing a high octane value blending fuel, polymerization is well justified, C. R. Wagner, chief chemist of the Pure Oil Co., said.

P. M. Robinson, research and development engineer of Pennzoil Co., led discussion of Mr. Wagner's paper, as did D. R. Blumer, research assistant at the college.

H. R. Pierce, of Sistersville, W. Va., pointed out that an investigation of a sufficient number of different sands might provide an index of recovery characteristics for various types of sands, although no one sand would reproduce results found in another sand.

C. C. Hogg confirmed Doctor Hassler's suggestion that intermittent operation of certain types of pressure wells would give better results. Old wells which had blown through, he said, had been put back into service by this method.

Harry M. Ryder, Bradford producer, was the author of two papers, one on measurement of permeability without cores, and one on power requirements in well pumping with a central power, the latter read by H. J. Bannon of Oil Well Supply Co.

Howard S. Bean, chief of the department of gas measurement, U. S. Bureau of Standards, discussed developments in application of orifice meters.

Conservation Law Appeal

AUSTIN, Tex., Apr. 27.—Attorney General William McCraw has begun preparations to defend before the U. S. Supreme Court the three-judge federal court decision upholding the state conservation law prohibiting use of sweet gas in the manufacture of carbon black. The appeal will be carried to the highest court by the Henderson company, which was refused a permanent injunction against provisions of the antigas waste statute.

Kansas Rate Reduction

TOPEKA, Kans., Apr. 27.—Homer Hoch, chairman of the State Corporation Commission, announced the Cities Service Gas Co. had filed rate schedules providing reduced charges for domestic gas in 75 Kansas cities and towns. Dismissal of the formal rate case prosecuted by the commission since 1931 will follow, Mr. Hoch said.

Under terms of the agreement made public by Mr. Hoch, Cities Service Gas Co. agreed to reimburse the state for the cost of the investigations and rate hearings started in 1931. Total expenses were $171,951.

The new rate schedules vary with different communities, but would result in total annual savings to gas consumers of Kansas of approximately $750,000, the commission chairman stated. While the new rate schedules were based on local conditions, the effect would be the same as if the city gate rate from pipe lines had been reduced from the present 40 cents per 1,000 feet to 31.27 cents.

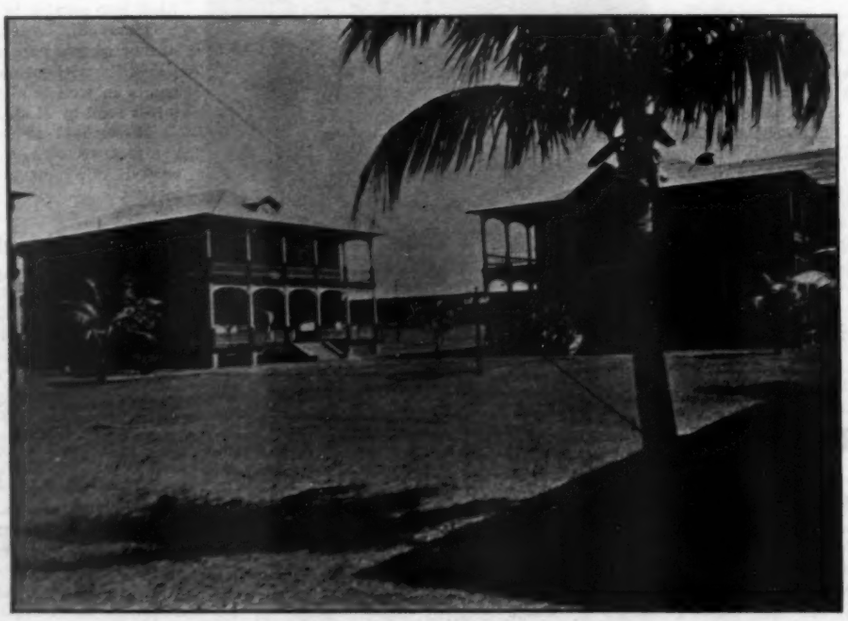
Oil Operations in Mexico Vital Factor in Improving Conditions of Labor

TAMPICO, Mexico, Apr. 24.—The social responsibilities that rest upon large industrial employers are perhaps nowhere more strikingly exemplified in their ramifications than in the oil fields of Mexico. Little is known of the human side of a vast social drama in which industry in the boom years had as its players upwards of 50,000 workers. Today there are approximately 17,000 workers in the northern and southern fields and on the Isthmus of Tehuantepec and in the sales divisions who, nevertheless, enjoy ample social benefits and a higher wage scale than was set even under the stimulus of flood-tide production and exportation that once had put Mexico in second rank in the producing areas of the world.

The oil companies, indeed, have been the chief protagonists in the field of labor advancement and social welfare in Mexico. Nor was this primarily induced by legislation governing relations between employers and employee. It was a natural concomitant to efficiency of the worker—an early realization that well paid contented labor is cheap; that cheap labor dissatisfied is high.

Tampico—chief oil center of Mexico—still is relatively remote from any industrial community from which skilled workmen may be drawn. Twenty years ago it was even more isolated. The principal sources of labor were the Indian inhabitants. They lived under the most primitive conditions, depending upon their corn fields for frijoles and "maize" and on game that could be trapped or killed with smooth bore muzzle loading shotguns. Their villages were largely of bamboo huts thatched with straw. Revolution had ravaged the country; the clothing of the masses consisted of home woven straw hats, sandals, cotton blouses and pantaloones made of the cheapest cotton cloth. The Indian's chief tool was the machete.

But the business of exploring and drilling for oil during the peak years of production in Veracruz and Tamaulipas created overnight an unprecedented demand for labor. High wages were paid under intensely competitive conditions among the operating companies—for the foreigner from both sides of the Atlantic surged into the newly proven fields to take part in the fascinating yet elusive and costly hunt for oil. He found and exploited the "golden lane." And he paid labor well—a policy still in general effect today.



Bachelor quarters and club house—"El Aguila"

It is true most of the skilled labor in the early boom days was imported. Geologists and engineers, drilling crews, mudmen, derrickmen, rig helpers, refinery workmen, still men, chemists, mechanics and machinists, pipe liners, tractor and truck drivers—all these, for the most part, came from abroad. But importation of foreign labor was expensive and often unsatisfactory. Then it was initial steps were taken to employ native labor on a large scale; they were trained to supercede the foreigner. Gradually Mexicans are being substituted in handling much of the mechanical equipment. The same transition filtered through the office personnel evenually extending to the technical branches in fields and refineries though these changes were slower. Thus the oil worker in the twenties and early thirties came to inherit a relatively high standard of wages.

What is the social picture today? Fully 93 per cent of all personnel in the industry is Mexican. The general pay scale is not only the highest in the republic but official records disclose it is more than double the general industrial wage level prevailing in the country.

Ten years ago the average wage in the oil fields had increased to 210.60 gold pesos per month ($105.30 U. S. currency) and in 1929 it was 213.57 gold pesos per month. Yet in 1934 the general average wage for all workmen in Mexico was 1.11 pesos per day or 33.33 pesos per month, less than $10.00 U. S. currency.

In the past seven years there has been a general wage rise in the industry particularly during 1934 when arbitral awards allowed increases and also imposed on the companies the obligation of full pay for the statutory weekly day of rest which alone amounted to 16.66 per cent of payrolls. This increased the wage level at least 20 per cent except for monthly employes. From the standpoint of the purchasing power of Mexican money, which actually is about 5 per cent greater than in 1929 when the country was on the gold basis, the wages of oil workers are higher than the average wage paid in the same industry in the United States. According to the American Petroleum Institute, the average wage in the United States is $1,217.00 per year. If this is converted into Mexican money—based on relative price indices (cost of living) and not on the international exchange rate—a resultant figure is obtained of roughly 2,500 pesos, hardly more than the average wage scale in Mexico in 1921 and less than even the wage scale in the country as late as 1929. The average cost of living in Mexico, based on a scale of minimum comfort for a family of five persons, was computed in the Annual Review of the Department of Labor to have been 1.79 pesos per day or 53.70 pesos per month for a laborer in 1934, taking the republic as a whole. This compares with an average of some 250 pesos per month paid the employes and workmen of the oil companies, including cost of social services extended.

The oil industry today also affords its employes even greater privileges than required under the federal labor law. Social prerogatives enjoyed by workmen in the industry include full hospital facilities, payment of half wages to employes laid up with non-professional illnesses, up to not exceeding 60 days in any one year. All sick alike, including dependents, are extended medical aid and medicines at company expense. Free services of eye, ear, nose and throat specialists are provided: cash benefits in cases of death from vocational accidents and vocational diseases are greater than the law demands; and savings funds and other services to encourage thrift are maintained to which the companies in general contribute a sum equal to that deposited by the employe—usually 5 per cent of their salaries. The total in wages plus these benefits costs approximately 50,000,000 pesos a year or about 3,000 pesos annually per person employed in the industry.

The Association of Producers of Petroleum in Mexico, to which most of the oil companies belong, made this observation in a recent public statement touching on labor in the industry:

"The petroleum companies in Mexico are deeply concerned about maintaining, so far as within their means, improved conditions for labor. They are convinced of the necessity that labor should be adequately remunerated and that it enjoy as much social security as is possible against the vicissitudes of life. The public must not lose sight of the fact that, correlatively, prices of petroleum products must be in accord with production costs, a reasonable profit and the maintainance of the high standard of living that the industry enables its workers to enjoy today."

High wages alone are not conducive to health and physical well-being of employes, especially in tropical and semi-tropical regions. Malaria, for instance, was widely prevalent in the area at the time of intensive operation of a dozen or more oil companies. In certain districts smallpox, yellow fever, and even bubonic plague had to be fought. The work of the national and state health authorities aided by the Rockefeller foundation and the oil companies virtually wiped out these menaces and it has done much to control tropical fevers. The cost today of social welfare and recreational services has greatly increased by virtue of the obligation to pay full wages for the seventh day; and additional social prerogatives amount in some cases to another 15 per cent of payroll. An aggregate figure covering some of the more important phases of social welfare within the present limited operations of the industry—housing, medical attention, schools, industrial training, recreation centers—would, it is estimated, run to nearly 10,000,000 pesos a year.

There are probably around 2,000 children of

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SIZES 25 TO 300 H. P.
3 BORES AND STROKES
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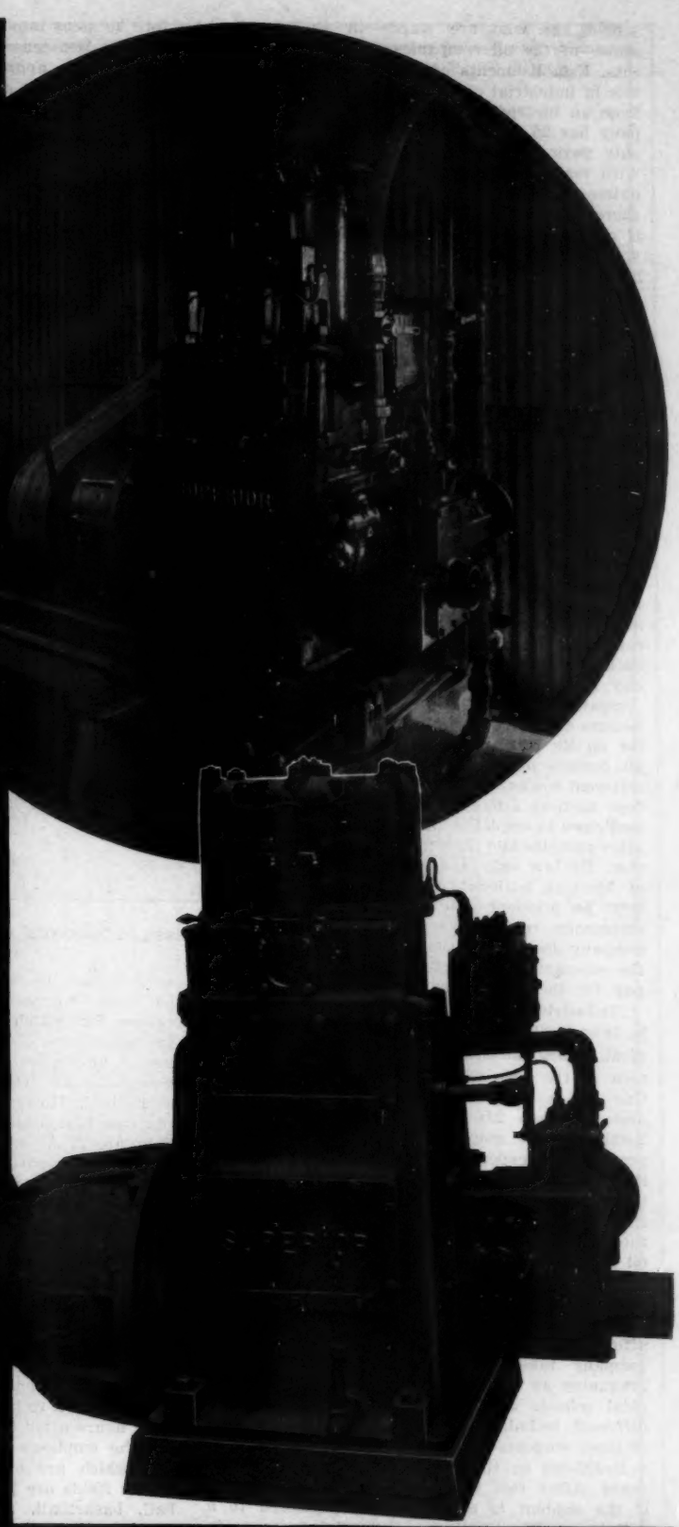

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Design incorporates manifold advantages of crosshead construction—large shaft and bearings—splash and flood lubrication and force feed to cylinders...Wide power and speed range is ideal for Geared Pumping Units, Powers and other heavy duty service.

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National

school age who are wards—in an educational sense—of the oil companies employing their parents. Establishments of schools is compulsory by law in industrial centers three kilometers or more from an incorporated community. One large company has 25 teachers on its payroll; another not only pays the teachers, but supplies the pupils with text books, paper and pencils. The law requires that schools be built and maintained where there are 20 or more children of school age, so if only five workmen were employed in any one spot and each had four children a school would be in order. On the Isthmus of Tehuantepec there are over 400 children in schools maintained by the principal company operating in that section. The educational authorities—both state and federal with full support of the federal government—are imposing upon the industrial concerns obligation of maintaining schools not only for children of their workmen but for the children of anyone living in the vicinity where the town or community originally sprung from the company's activities. Children of parents having no direct connection whatever with the company enjoy fully these privileges to which they are not ethically entitled. Hospitals, of course, are provided in all fields and at terminals. All major companies have doctors for each important camp, both day and night duty. One company has 13 full time doctors and a medical director on its staff as well as 29 doctors on retainers in different towns who provide free medical attention and medicines to employes of the sales agencies and their families. By law only a doctor of Mexican nationality can treat an accident case. In emergency cases when no company doctor is available, the company is obligated to pay for the services of an outside doctor.

Houses in laborers' camp, Huasteca Petroleum Co.

Industrial training afforded by the companies, by law, is likewise generous. In provides for technical, industrial and practical training for workmen or the sons of workmen along these lines: One for a company employing more than 400 and less than 2,000 workmen and 3 for every 2,000 or more employes. The arrangement also provides for expenses at home or abroad during training. The companies also accept a yearly number of students picked by the government from the National University or other technical institutes for a two months' practical training in the oil fields or refineries. During this time the companies provide them with free board and lodging and pocket money for incidental expenses. In one company alone more than 20 students have been afforded this training in one year. Another major company takes on young Mexican engineering graduates as they leave the university or technical schools and undertakes to train them in different technical divisions. More than a score of these students have been afforded training and a livelihood in this way during the past three years. After two years or less of such service, if the student is capable he is promoted to a definite position with a substantial increase in pay. Later, if he shows marked ability he is sent to Europe or to some country on this continent for additional training. Here the law exacts restrictions which, according to company officials, plainly militate against a desirable and more liberal exchange of technical skill and ideas—that is, the transfer of a technical man from one branch of the industry to the same or another branch of the same company in another country and vice versa. This situation, working both ways, is pointed to as actually hindering technical development of the industry in Mexico. Nor is it an easy matter to get an entry permit for a foreign technician. He may be imported only on condition that he prove to the satisfaction of the authorities that none of his particular qualifications is available in Mexican personnel. But there still is a hitch. The government designates an assistant, fixes his salary and specifies the time that may elapse before he steps into the job of the man imported.

The Mexican labor law also provides there must be one apprentice for every 20 artisans or office workers. A son of a worker is usually chosen though the labor syndicate is entitled to designate its man. Every year a mixed committee composed of representatives of workers and employers and of the Federal Labor Board examine these apprentices for purposes of advancement.

Housing conditions in the oil fields have shown marked improvement in recent years as a considerable number of houses have been built. The average type contains a living room and one or two bedrooms with shower baths and kitchen having running water. Varying types of houses are provided ranging from blocks of 10-room buildings for single workmen to married quarters having one or two bedrooms as well as living room. All are equipped with electric light. The estimated cost of a workman's house is $400.00 to $700.00, its average life being from 8 to 10 years.

The companies legally are allowed to charge a rental at the rate of 6 per cent of the assessed value. In former years the companies erected houses for workmen in the refineries and in camps for which no rental was charged, and in many cases this is true now though for the newer and more expensive type of houses the companies are charging the 6 per cent rental authorized. However, these rentals barely cover the cost of maintenance and upkeep. Water and light are free.

Ice—an important item—is delivered at cost and is available at centers employing more than 50 men. All drinking water is tested; and in most cases the company obligates itself to furnish this water at a temperature of 20 degrees (centigrade) as well as hygienic drinking cups. Boots are provided for all workers who work continuously in water, mud or oil.

The average work day in the fields is from 7:00 a.m. to 4:00 p.m. with one hour for midday meal; and half a day on Saturdays, though pay is for six and one-half hours. This schedule applies also at refineries. There are enough daylight hours after the work day in these latitudes for the employes to partiicpate in sport activities which are encouraged by the companies. Sports fields are provided by employers for football, basketball, and baseball, the latter most popular. Virtually all the companies contribute 100 pesos monthly in the different camps towards sport equipment and upkeep.

Workers are allowed vacations: One to four years service—six days per year with pay; five years services and successively up to 15 years—12 days; 16 years services or more—18 days.

Pensions: Retirement pensions are provided at the age of 55 years (50 years if the worker is incapacitated) at 75 per cent of the last wage earned; for life after 30 years of service and 65 per cent of wage after 25 years of service.

The oil fields are fully syndicalized, corresponding broadly to organized labor in the United States. Practically, each syndicate enjoys virtual autonomy though there is a Central Syndicate of Petroleum Workers of Mexico. However, a company must make a separate collective contract with each syndicate. No two contracts are precisely alike, except in an individual company which may have as many syndicates as it has camps. This results in a volume of executive and personnel routine relating to complaints, alleged violations of contracts and requests for additional prerogatives, transfers, etc., allowable under law. Contracts are renewable every two years, but this does not mean that fresh demands may not be made by syndicates within that period; for in practice only the syndicate has the right to abrogate a contract. These contracts appear to embrace every conceivable phase of working relations between employer and employe including a multitude of provisions involving not only hours of work and pay but relating to vacancies and promotions, dismissals and discipline, classifications of work and workmen, seniority, transfers, medical services and indemnities, rules for savings funds, apprentices, tools and special protective equipment against risky work, transportation facilities, and for mixed commissions when disputes arise. The personnel department of a company are directed by Mexican or foreign employes who are presumably well versed in labor legislation and in handling labor disputes.

In practice, arbitration of labor disputes is voluntary in Mexico and the right to strike is recognized. Under provisions of a collective contract a company can be compelled to discharge an employe—regardless of how valuable he may be—if he is ousted by the syndicate. All promotions among members of the syndicate are by length of service, the syndicate having virtual plenary powers in this regard, and there is equal pay for equal work. The merit system does not exist except in a limited number of positions of confidence in each company. These are filled by the company. Nor can a company employ a man without the syndicate's approval except for a post of confidence. The closed shop is rigidly enforced. A member of the syndicate must submit to its dictates regardless of his loyalty to his employer; otherwise his dismissal is virtually certain. His years of efficient service and his personal convictions may be summarily disregarded when the influences of syndicate politics are pressed against him.

Committee Clarifies Proposed Petroleum Marketing Code

CHICAGO, Apr. 27.—Certain clauses in the proposed petroleum marketing code were clarified at a meeting here of the standing committee in charge of it, and hope was expressed that the code, for country-wide acceptance, would be ready for submission to the Federal Trade Commission early in June. Changes in wording are designed to make it conform more definitely with the principles enunciated by the U. S. Supreme Court in its recent Sugar Institute decision.

In the preamble the word "agree" is avoided in referring to the intent of those observing the code. The original definition of a jobber described him as one who carries a stock of petroleum products to sell to dealers or others. The words "by tank-wagon" were inserted before "to dealers." A specific statement was adopted authorizing cooperatives organized in any state to obtain patronage dividends.

Rule 2 covering price postings was clarified by eliminating the provision that a posted price must remain in effect 24 hours before new prices may be posted. An added rule prohibits a vendor of petroleum products from lending money to a reseller or a consumer and from extending credit in lieu thereof and from reimbursing for the payment of license fees, excise taxes, etc.

In Rule 3 the words "at retail" were dropped from the provision concerning giving away articles. This will permit refiners to continue the practice of supplying maps to their dealers, etc.

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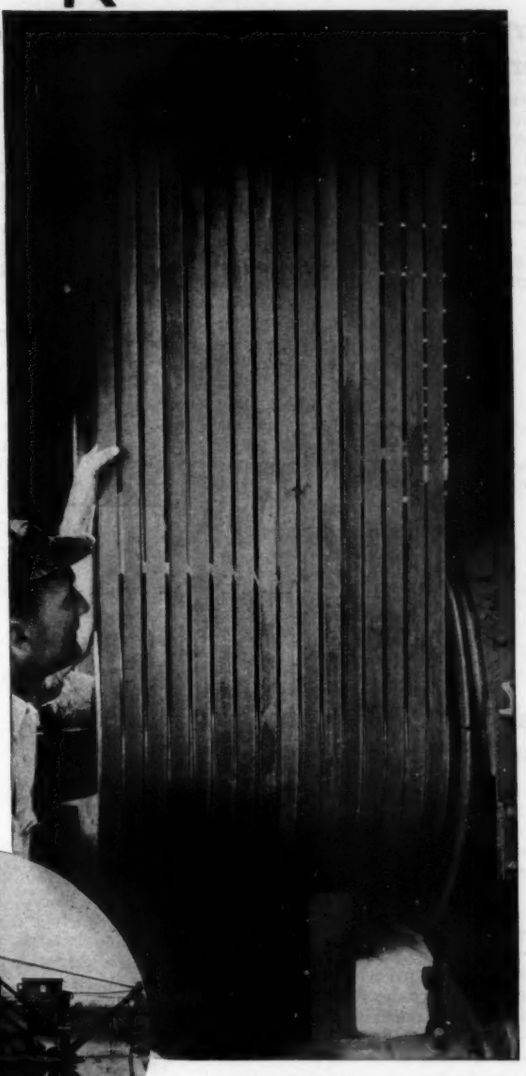

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Oil News from Foreign Lands

First Quarter Crude Production in Peru 4,022,443 Bbls.

PERU

The production of crude oil in Peru during March, 1936, amounted to 1,351,810 bbls., a daily average of 43,606 bbls. This compared with a production of 1,293,627 bbls., or 45,297 bbls. daily, in February. Production for the first quarter of 1936 totaled 4,022,443 bbls., a daily average of 44,202 bbls. The principal producer, International Petroleum Co., Ltd., produced slightly less in March than in February, as calculated on a daily average basis, the March, 1936, daily average being 37,737 bbls., compared with 39,545 bbls. daily in February. The March figure was also slightly under the daily average for the first quarter of 1936, which was 38,350 bbls. The following table shows crude oil output in Peru for March, 1936, February, 1936, and the first three months of 1936, by companies (figures in barrels):

	Mar., 1936	Feb., 1936	First quar., 1936
International Pet. Co., Ltd.:			
Total	1,169,859	1,126,810	3,489,583
Daily average	37,737	39,545	38,350
Lobitos Oilfields, Ltd.:			
Total	181,951	166,817	532,560
Daily average	5,869	5,752	5,852
Grand total	1,351,810	1,293,627	4,022,443
Daily average	43,606	45,297	44,202

New President of Venezuela Welcomed by Industry

VENEZUELA

The election of Gen. Elezar Lopez Contreras, Saturday, April 25, as president of Venezuela was gratifying to oil operators in that country. General Contreras was elected provisional president last December following the death of General Gomez, president and dictator of the country for many years. General Contreras has maintained friendly relations with oil companies and it is understood that he does not contemplate any major changes in oil policies. It is believed that he will be able to cope with labor factions which for brief periods in recent months have threatened to interfere with oil operations in several fields.

Plan New Refinery in Italy to Run in Oil from Albania

ITALY

The Montecatini, one of the most powerful business organizations in Italy with branches in several industries, is now reported to be interested in a project involving the construction of a new oil refinery in Italy. Under the proposed plan the Italian government will be interested in the refinery which will operate with crude from the Albanian oil fields which are controlled by the government. The refinery probably will be located at Bari.

The new company will be known as A.N.I.C. (Azienda Nazionale Idrogenazione Carburanti—National Motor Fuel Hydrogenation Co.) and will have a capital of 400,000,000 lire, of which 200,000,000 will be contributed by the Montecatini and the remaining half by the A.G.I.P. (Azienda Generale Italiana Petroli—General Italian Petroleum Administration) and the State Railways for account of the A.I.P.A. (Azienda Italiana Petroli Albania—Italian Petroleum Co. in Albania), the Italian concern operating the wells in Albania. The Montecatini will increase its own capital from 600,000,000 lire to 800,000,000 lire by drawing 100,000,000 lire from the company reserves and issuing new stock for the remaining 100,000,000.

It is understood that the pipe line from Kuohovo to Valona has been in operation for several weeks. The first shipment of Albanian crude oil of 4,152 tons was taken by the Italian tanker "Maya" for the refineries at Fiume and Marghera. The pipe line passes through Fieri, Roskoveo, Skrafolin and Uji Iftoft.

April Taxation in Mexico; No Changes in Export Tax

MEXICO

Slightly reduced values for gasoline and kerosene with corresponding reductions in production tax rates, are indicated by the latest circular issued by the Mexican government covering the month of April. No changes have been made in export taxes. The new production taxes and those for March, are as follows (United States currency):

Per barrel:	April	March
Crude oil, Be. 20.38	$0.12312	$0.12312
Crude oil, Be. 15.65	.07437	.07437
Fuel oil, Be. 17.21	.11442	.11442
Per gallon:		
Crude gasoline	.00350	.00360
Refined gasoline	.00175	.00180
Crude kerosene	.00314	.00320
Refined kerosene	.00157	.00160

The export prices continue on the following basis:

Per barrel:	
Crude oil, Be. 20.38	$0.07949
Crude oil, Be. 15.65	.04928
Fuel oil, Be. 17.21	.05962
Per gallon:	
Crude gasoline	.00472
Refined gasoline	.00189
Crude kerosene	.00151
Refined kerosene	.00057

The production tax on fuel oil will vary approximately $0.00938 per barrel for each degree of specific gravity above or below 0.05 specific gravity (Be. 17.21). The production tax on light crude will vary approximately $0.01009 per barrel for each degree of specific gravity above or below 0.93 specific gravity (Be. 20.38).

The export taxes are figured in United States currency at the rate of 2 pesos per dollar.

Spanish Monopoly Reports on Operations and Profit

SPAIN

The report of the Compania Arrendataria del Monopolio Petroleos, S.A. (Spanish oil monopoly) for 1935 states that of the 799,047 tons of petroleum products imported, 305,997 tons (38 per cent) came from Russia and Rumania, while 493,050 tons (62 per cent) came from the United States and European refineries. American supplies were obtained partly by means of contracts with Atlantic Refining Co. and Texas Corp. The contract with Texas Co. dated from June 1, 1935.

The report points out that the company acquired 121,666 hectolitres of dehydrated molasses-alcohol for motor fuel purposes under the alcohol act of June 4, 1935, and that "to recover the loss sustained owing to the higher price of alcohol compared with gasoline, the novel procedure of raising the prices of products other than gasoline (kerosene, gas and diesel oil, fuel oil, paraffin wax and lubricants) was adopted." Under a law of October 22, 1935, the monopoly must acquire the production of liquid fuels and other oils derived from indigenous primary materials. Purchases will be fixed for the next three years in such manner as to limit losses to 18,000,000 pesetas.

The monopoly's own profit in 1935 amounted to 21,572,182 pesetas and a total dividend of 8 per cent was paid free of tax. The state's participation in the dividend amounted to 2,027,443 pesetas.

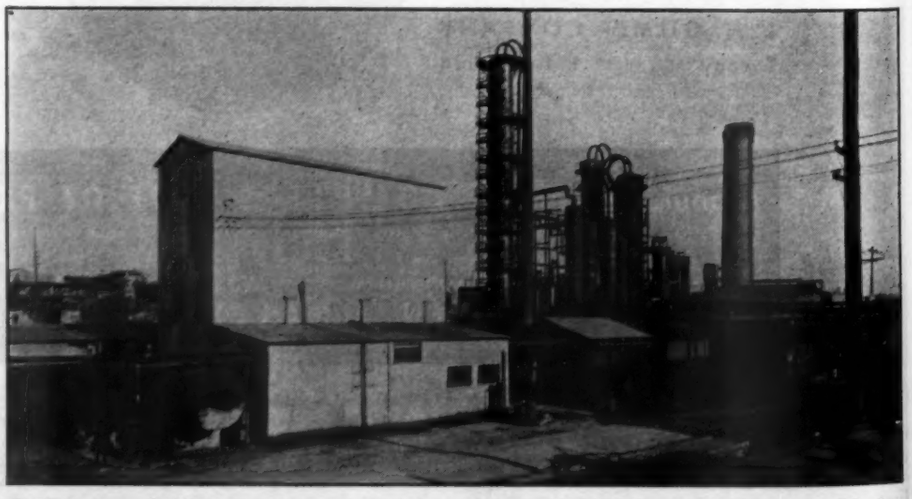
Total authorized expenditures for new construction during 1935 were 13,279,484 pesetas. The peseta is equal to approximately 13.65 cents at the present rate of exchange.

U. S. S. R. Production Shows 20 Per Cent Increase

U.S.S.R.

Crude oil production in Russia during February, 1936, totaled 15,283,800 bbls., a daily average of 527,027 bbls. This compares with 16,153,900 bbls., or 521,093 bbls. daily in January. Production for the first two months of 1936 aggregated 31,437,700 bbls., as compared with 26,069,400 bbls. for the corresponding period of 1935, an increase of 5,368,300 bbls., or approximately 20.6 per cent. This increase is accounted for by gains in the Azneft and Grozneft, among the older fields, and the newer Bashkirneft field. The latter increased its production from 158,200 bbls. in the first two months of last year to 940,100 bbls. in this year's period.

Refinery runs in the first two months of 1936 totaled 27,055,700 bbls., a daily average of 450,928 bbls., against 22,302,000 bbls., or 378,000 bbls. daily in the corresponding period of 1935.



Oxidizing asphalt plant in center, topping plants right background, Tampico, Mexico, refinery of the Pierce Oil Company

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Crude Prices

The continuing increase in the demand for gasoline is reviving agitation for an advance in the posted price for crude. Some of the arguments have undoubted merit. It is true the industry is spending money on a scale never duplicated to assure not only a supply for current requirements but to provide reserves for the immediate future. In doing this it is spending more money than is being obtained at current prices.

Part of this, however, is capital expenditure for which returns must be looked for in later years, but the fact remains that this enormous investment is demanded and justified by the responsibility of the industry to provide a billion barrels a year.

The point is also made that when production is found the proration restrictions limit the quantity of oil that may be taken from the wells postponing the producer's recovery of his outlay and his ultimate return.

This situation emphasizes the necessity of having favorable prices not only this year but in the years to come while returns on investment are being obtained.

But, despite the large demand and its probable continuance, the industry can easily overproduce even beyond this record demand. The significance of this from a marketing angle is that if too much oil is produced it will be refined and sold—at distress prices, with the customary depressing effects on price levels in every branch of the entire petroleum industry.

Before the industry can show it is entitled to higher prices it must demonstrate its ability to keep its house in order at the present prices. It may believe it is entitled to $1.50 a barrel based on its responsibility to provide a billion barrels a year and the tremendous expenditures involved but unless it can keep production from exceeding demand at $1 or $1.15 a barrel, what chance would it have if the price were advanced to $1.50 with all the invitation to more drilling that would offer?

The upturn in production during recent weeks is not a development tending to higher prices. This must constantly be considered by producers, even without the additional threat from Rodessa or Oklahoma City extension.

It has been well said that mounting production is the weakest link in the chain. If more oil is available than current demand requires, it will find an outlet which will be reflected in the products market and react upon the crude price structure sooner or later.

Conversely, the chief hope for a better crude price lies in the tightening of crude production to the limits of demand. There is a well defined limit to the increase in consumption and production must keep within that limit if there is to be any advance in the crude price structure.

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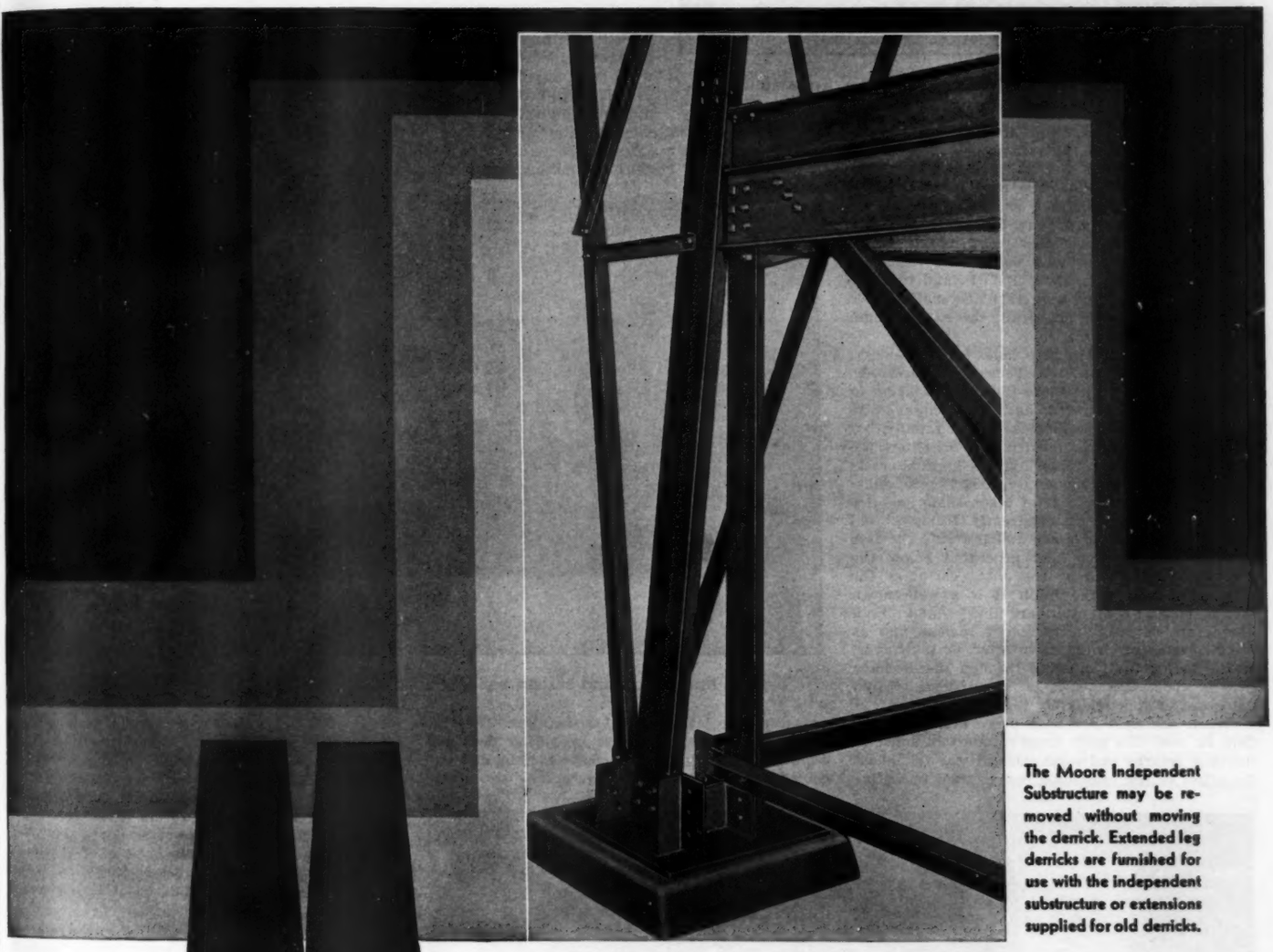

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Handling Hot M... in Rodessa Fi...

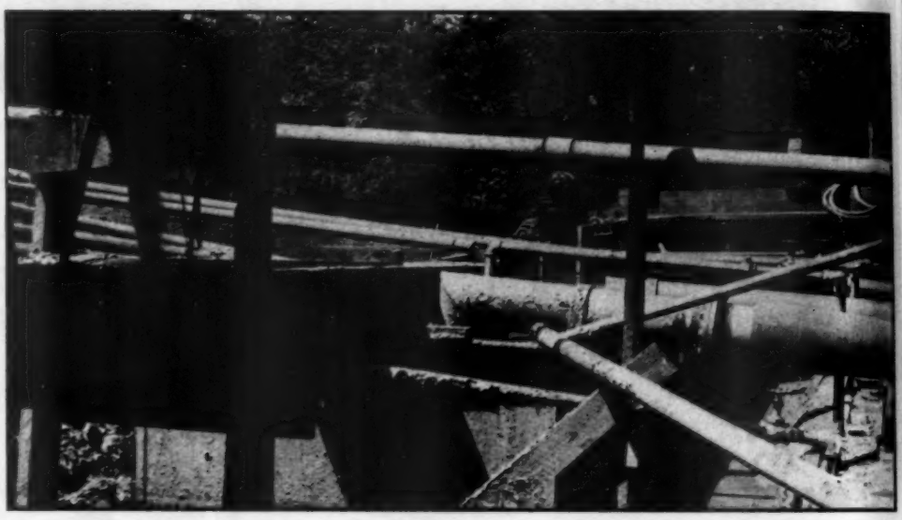
Mud handling assembly at well in the Rodessa field

Handling hot mud during the drilling of wells by the rotary method is one of the major problems in the development of the Rodessa, La., oil field. The mud laden fluid becomes heated to as much as 190° F. when the drill enters the gas producing formations found at about 5,500 feet. From that point to the bottom of the hole, a little below 6,000 feet, the formation temperatures register about 190° F. and the mud takes on this heat and will reach the surface from many wells containing practically this same amount of heat.

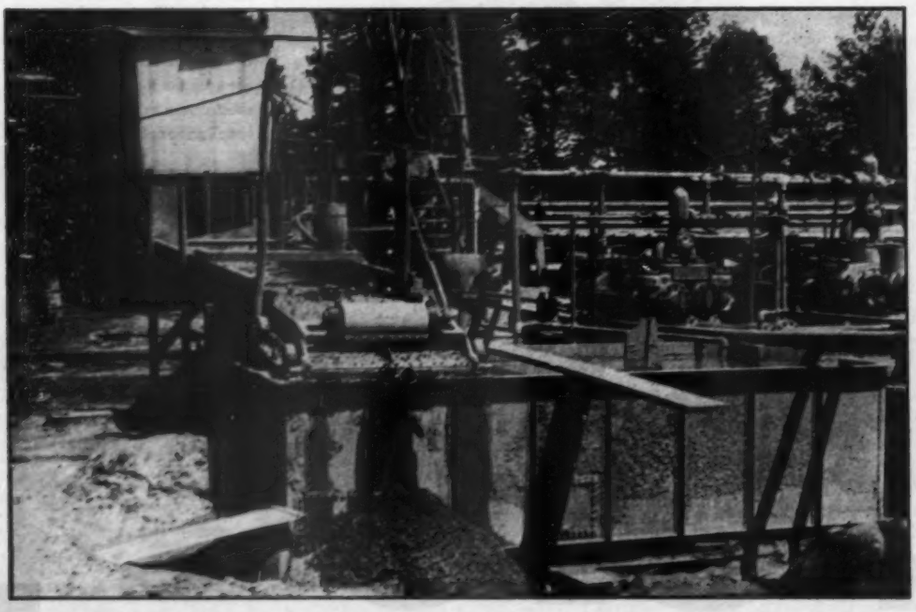
The temperature in bore holes in the Rodessa field range from about 100° F. near the surface to 140° F. at 5,000 feet, where the first stringers of anhydrite are penetrated, and from there on to the bottom of the hole increase rather rapidly, but the greatest change is noted as the bit enters the anhydrite formation. This layer is approximately 250 feet thick and is made up of nearly pure anhydrite with some thin beds of black shale and fossiliferous limestone. It apparently forms a seal over the rocks of older age and prevents the free upward movement of heat generated below the crystalline rocks and by the displacement of the formations due to the fault. It is a well-known fact that areas near faults are always hotter than like strata of rock in unaltered regions and as the displacement on the downthrow, or south side, of the major fault running through the Rodessa field is about 600 feet it is not difficult to find the cause of this relatively high temperature.

When the first gas wells were drilled in this field in 1930 this high temperature was noted in the mud returns and some concern was felt about the effect of the heat upon cement used in setting the casing. By rapid placement it was possible to secure good cement jobs in the earlier wells and as the new work has developed the cementing program has been changed to meet shifting conditions. In the summertime it has been common practice to use as much as 6,000 pounds of ice for chilling the mixing water while cementing the last string of casing just above the producing formations. This precaution does not seem necessary during the cooler months and one contractor has found it advantageous to enlarge the size of the hole from 8⅝ to 9⅝ inches for the string of 7-inch casing set at from 5,800 to 6,070 feet. By providing the additional space between outside of casing and walls of the hole the pressure required to place the cement has been reduced and during the past winter and spring months has helped to eliminate the need for ice water in mixing the cement.

The heating of the mud has caused many problems and they have been handled in various ways by the different drillers. The formations are drilled with roller bearing type roller or cone bits after the upper formations have been penetrated. For the first 2,000 feet in the 13⅜-inch hole the Zublin bit, developed in California, has won much favor in this field, but below that depth the roller or cone type bits are used. A total of about 32 bits are required to drill these 6,000-foot holes. Because of the heat encountered it is impossible to use a lubricated bit.



Typical flume, box and screen used to handle hot drilling mud in Rodessa area



Vibrating screen mounted over steel mud box eliminates digging of mud pits

The temperature of the drilling mud increases gradually as the hole is deepened. The formations provide good mud-making material down to the red beds encountered at 3,400 feet and many contractors use this natural mud without any admixtures to the red beds and then add baroid, aquagel and baroco to increase the mud weight to about 10.2 pounds per gallon and hold the viscosity around 22 sec. points as indicated on a Marsh mud funnel. The viscosity of this mud is a very important function and some operators will start with prepared mud and condition the natural mud gradually so that there is no marked change when the red bed section is entered. This procedure simply means the gradual adding of admixtures instead of adding larger quantities when the critical depth is reached.

The formations all stand well so the contractor is not troubled with caves and straight holes are usually drilled. There are times when the bits will wander away from vertical but present drilling technique quickly detects such deviations and the hole is immediately straightened. The equipment used in this field for drilling is of the very latest and heaviest type and all rigs are provided

Mud Problem of Rodessa Field

By L. G. E. BIGNELL

Slush pit excavated at location of Rodessa drilling well

with weight indicators and the drillers use them all the time. Sufficient experience has been had to permit the drillers to know just what weight to carry on the bit for the various formations and keep the hole straight and make good progress. The holes require about 45 days to complete.

The casing programs vary but one now popular consists of setting a 300-foot, 13⅜-inch surface string with 300 sacks of cement allowed to set for one day, then drilling hole for 2,200 feet of 9⅝-inch grade C casing set with 420 sacks of cement allowed two days to set and finishing with 6,000 feet of 7-inch 24.3-pound grade D casing cemented with 600 sacks and setting for three days before drilling plug.

Vibrating screen at end of mud ditch removing cuttings from the drilling fluid

Trouble has been experienced in this field through the sticking and twisting off of drill pipe. Washouts and sticking of casing has also given some trouble. There are many different opinions held by the drillers as to the cause of these troubles but in general it seems they may be attributed to washouts following twist-off of drill pipe, lowering of mud viscosity and thereby making it more difficult to move in the annular space between drill pipe and walls of hole and thus reducing carrying capacity and failing to remove cuttings as made. Another reason why cuttings have accumulated in the hole is grooved walls due to crooked hole. These conditions lead to the careful preparation of mud and the vibrating screens are used at most wells to remove cuttings from mud returns. This undoubtedly plays a large part in mud reconditioning and keeps the mud in proper condition for free flow both into and out of the hole so the velocity of current is high enough to carry out cuttings as quickly as made. These formations cut fairly easily and tend to break into relatively large pieces and the general practice is to run the mud returns over a screen cloth with 30-mesh openings. Such screens have capacities of about 750 gallons of fluid per minute and under normal conditions are operated carrying about one-third load.

Sample box placed beneath mud flume

One feature common to this field but unusual to others is the change in the mud viscosity occasioned by the liberation of salt crystals when penetrating the anhydrite. These salt crystals dissolve and change the mud viscosity quickly and with the lower viscosity the mud moves more sluggishly and its carrying capacity is reduced and cuttings accumulate in the annular space between drill pipe and hole and if the pumps are shut down for any reason these cuttings will quickly fall back and plug the stem in the hole.

Another unique feature in this field is the tendency of the mud to dry out when used in drilling the formations. This seems to be especially true if aquagel in excess is used for it gives up its water quickly and dries out in some instances it has been found caked behind the pipe. These troubles are being constantly corrected by mud engineers and a new material is now available to offset the effect of salt on mud viscosity and it is being used to advantage in this field. It is known by the trade name of "Baroco."

Some operators have prepared rather elaborate mud handling and cooling systems. The need for special equipment to cool the mud depends largely upon the contractors ability to secure ample space for the construction of mud ditches and slush pits. Away from the town lot operations it is not hard to get plenty of space in which to construct the usual type of mud ditch and pit and by circulating the mud it will cool before it reaches the suction pipe on the slush pumps.

However, there is the item of cost for constructing these mud ditches and pits to be considered and when a contractor is running a number of rigs and changing his tools about every 50 days from one location to another the total cost of excavation for pits and ponds amounts to a considerable sum.

Some drilling contractors have therefore built wooden flumes through which the mud flows and if allowed to, makes its escape downward through a series of holes bored in the bottom of the flume. These streams of mud strike upon heavy wire cloth placed between the upper and lower flume and this tends to cool the mud by breaking the stream into small parts. From the lower flume the mud escapes into a steel receiving trough and flows back to the suction hose for the pumps. In leaving the casing on its return the mud is conducted directly to the vibrating screens where the cuttings are removed.

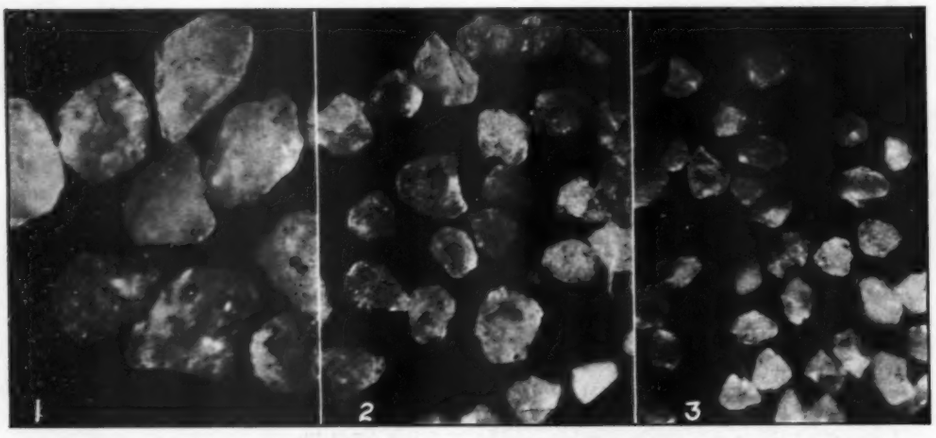
Other operators prefer to spray the mud through sections of 6⅝-inch casing in which numerous holes have been drilled to give direction to the various sprays. The mud is thus aerated and falls into a slush pit and is allowed to flow back to the suction end of the pumps. Cuttings in this system are allowed to accumulate in the mud ditch and are shoveled out at frequent intervals.

Mud spray for cooling hot mud

Permeability Measurements o

Factor in Determining the M

In the planning and development of a repressuring operation, whether it be gas, air or water, or in the search for repressurable sands, the most important physical measurement of the sand properties is permeability. Porosity and saturation are vitally important, it is true, in determining whether or not a sand is worth repressuring, but they have little to do with how to repressure it. Studies of the chemical and physical properties of the various substances in and around the sand grains are also important, as they may determine the particular specifications of the repressuring medium and its preparation, but they ordinarily will not enter into the general problem of the technically most effective method of repressuring a particular property.



Various size sand grains found in one sample of Bradford sand. Fig. 1—Grains on 40-mesh sieve. Fig. 2.—Grains on 60-mesh sieve. Fig. 3—Grains on 80-mesh sieve

And with all this, permeability has been one of the most costly and difficult of the determinations to make, if it is to be done in such a manner as to be of practical use. Its importance lies in its very nature. Permeability is a measure of the fluid conductivity of the sand. It is therefore a measure of the rate at which a given fluid medium will move through that sand under specified conditions. Permeability measurements, studied in the light of experience, field and laboratory determinations and grain shape, etc., enable the engineer to make intelligent estimates of well spacing, medium and pressures to be used, sands or strata to be eliminated, and in the case of sands of varying permeability which cannot in practice be separated, to select glycerin shells for shooting which will tend to equalize, to some extent, the resultant variable rates of flooding. Permeability measurements do more than this. They make possible the location of strata which may be subject to excessive caving, and in the planning of shots to control this. Further, and this is very important, they aid greatly in the intelligent interpretation of results from actual floods, and the adjustment of operations directed toward improvements.

Until a few years ago, practical permeability measurements of oil sands was not possible. Dr. A. F. Meicher of the U. S. Geological Survey, and later Dr. P. G. Nutting of the same department, made very practical contributions to this work. With the use of their methods, however, the permeability of the sand under test would vary with time, as the determination proceeded, so that it was necessary to select an arbitrary period in the time of the test as the recognized measurement interval. This, of course, made it out of the question to make check tests on a particular specimen, and further, made all results relative. In spite of these limitations, the results were very useful, and made possible the application of the actual values.

Later Doctor Fancher at the Pennsylvania State College, and others, made intensive studies of the variations in the flow of liquids through sand with time, and succeeded in tracing down their causes, with the result that a really accurate primary method of permeability measurement has been achieved. They then went further, and reduced their method to satisfy practical control laboratory conditions, with the result that there is now available to any laboratory, a useful method and equipment for such primary determinations.

For certain phases of operation control, however, this method has two serious limitations. The specimen of sand used for the measurement must be cut from a core. This means that there must be a core. In the investigation of a new territory, or sand, coring is indispensable for a number of reasons. It is, however, also expensive, especially where cable tools are used, and slows up operations, and always introduces an additional hazard to the successful completion of the well. For ordinary day to day development of territory of known general characteristics, coring is, for these reasons, usually out of the question. But, as we shall try to show, permeability measurements may be of great value under these conditions, although, even so, coring may be out of the question.

Permeability measurements made on specimens cut from cores, although they may be very accurate for that specimen as it stands, yet they may completely mislead the operator as to the actual mean permeability of the strata under consideration. If a particular stratum is entirely uniform with respect to permeability, then the specimen should be representative, and the results of measurements are correspondingly valuable. If, however, that particular stratum is not uniform in this respect, the measurement can mean nothing to the operator.

Just how much sand is to be found in uniform homogeneous strata the writer does not know. When the mechanical processes of the laying down of the sand are considered, it seems remarkable that any appreciable volume of it could be uniform. In the particular properties in which the writer is at present interested, such uniformity is decidedly not the case over any appreciable area or sand thickness. In an actual permeability profile to be presented later, the permeability has been found to vary enormously in the space of a few inches vertically. Further, from well to well, at any chosen elevation, the permeability is found to be similarly variable.

In a particular specimen cut from a core, the measurement showed the permeability to be practically zero, although an inspection of the sand did not seem to indicate any such condition. A careful investigation revealed the presence of a small shaly area, perhaps the size of a large pea, which effectively prevented the fluid from moving through the specimen, although most of the

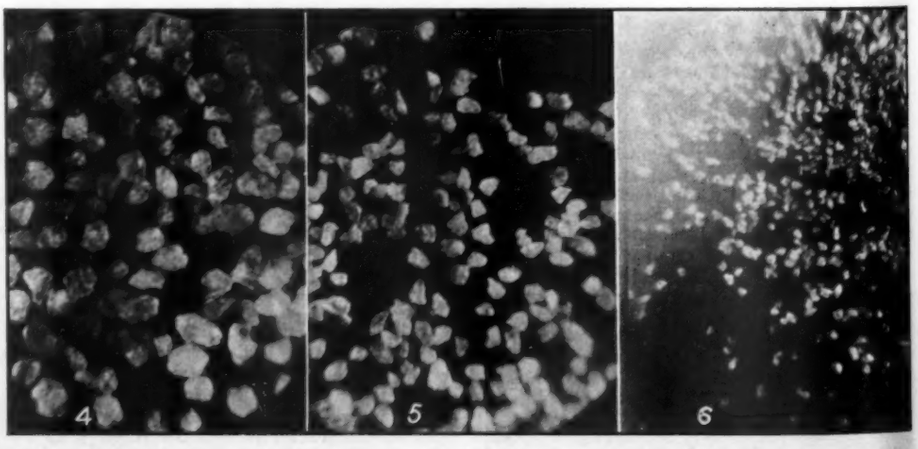


Plate showing variation in Bradford sand grain sizes. Fig. 4—Grains on 140-mesh sieve. Fig. 5—Grains on 325-mesh sieve. Fig. 6—Grains through 325-mesh sieve

* Presented at the Oil and Gas Conference, Penn. State College, April 25, 1936.

Oil Sands Important

Methods for Repressuring

By
HARRY M. RYDER
Ryder Scott Company*

sand surrounding this "plug" was clean and permeable. In the actual flooding of this sand, it seems reasonable to believe that the fluids would move up to and around this obstruction, and any similar ones which might be present, closing beyond such, and proceeding forward through the sand body. In short, the measurement on this specimen was 100 per cent wrong, and if the findings had been acted upon, absurd, and possibly tragic results, might have ensued.

In many cases, then, to assume that the mean permeability of a selected stratum is the same as that found in a specimen less than an inch in size would seem to be as dangerous as to assume the average wage of this country to be that of any accidentally selected individual.

The problem then appeared to resolve itself into a search for a method which will enable mean permeability measurements to be made in a practical manner, as foolproof as possible, and with the expenditure of a minimum of time and money. Where coring is impractical, the only material remaining on which to work consists in the drill cuttings. If they can be made to yield permeability figures, they have certain advantages.

We are not interested, remember, in scientifically precise measurements. We are not interested in primary measurements. We are not interested in fundamental research. We want a good working tool which will tell us, with an accuracy well within the homogeniety of the sand bed itself, how fast, relatively, a fluid will move through that sand bed under specified conditions. If the permeability of that sand bed varies considerably from point to point both vertically and horizontally, and we believe this to be true of many pay sands, obviously the permeability determined at one or a few tiny points may be, and we know frequently is, far from the desired mean value, and of consequent limited operating value.

We would not forego the privilege at hand, of precise measurements on specimens. Such measurements are exceedingly important for research and other purposes. The work described in this paper floundered for a number of years and was not successful until it had the precise methods on which to build. But with all its worth, certainly with nonhomogeneous sands, measurements from specimens are not the answer to the operator's every prayer.

We have the sand cuttings, separated from top to bottom of the well by the several screws in the process of drilling. These screws may vary in length, at the will of the operator, up to 8 or 10 feet. The shorter the screw, the more detailed will be the information obtained, at of course, a somewhat greater cost. Ordinarily we standardize on a 5-foot screw, but can work with a 1 or 2-foot screw if that seems desirable. A fair sample of the cuttings will constitute a mean for that screw. The sample will include, in addition to any shale or other material which may be present, chips of sand varying in size from one grain up to a quarter or half-inch diameter.

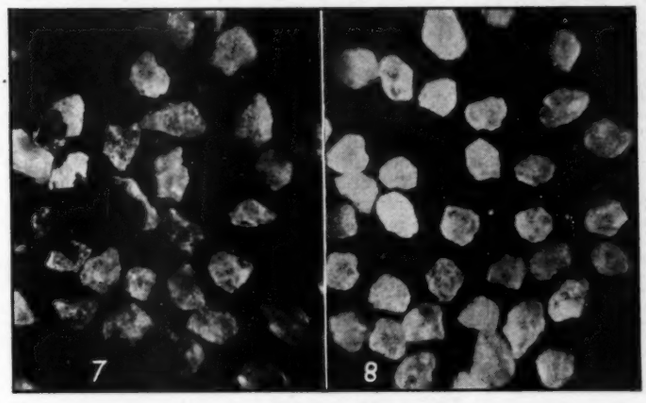


Fig. 7—Bradford sand clusters on 80-mesh sieve. Fig. 8—Bradford sand grains on 80-mesh sieve, the grains being ground too much. Magnified about 24 diameters

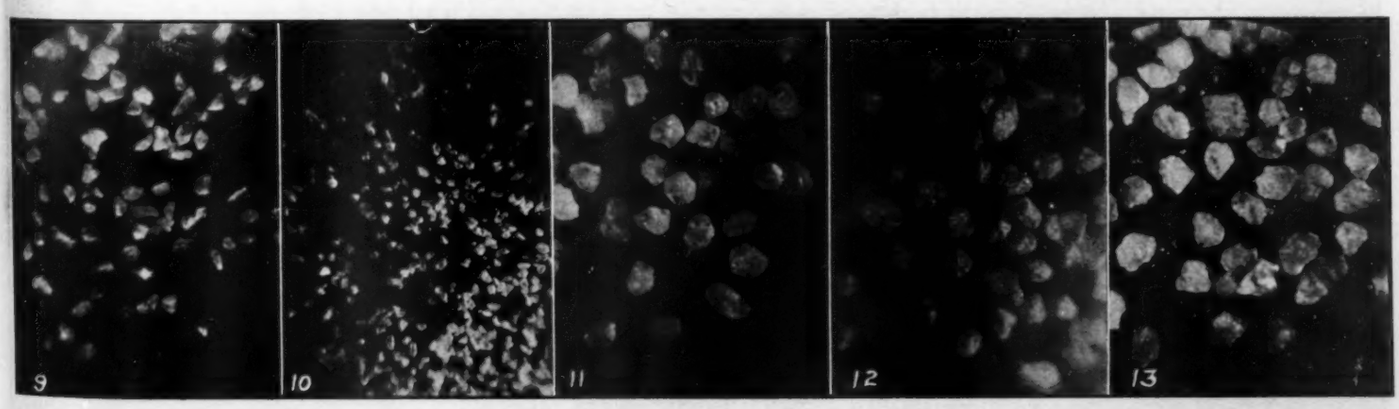
An examination of these chips reveals that we have two variables with which to work, the size of the sand grain, and their shapes. We are intensely interested in both. Figures 1 to 6, inclusive, illustrate, in the case of one sand, just what is offered for our ingenuity. These are magnified approximately 30 diameters and are all from one sand sample. Notice the great variety of sizes. Individual shapes, of course, vary without limit, but the examination of sands from different areas, or from different elevations in one well, for that matter, discloses many characteristic types. It is obvious that if all the grains in one sand were cubes, laid with their sides parallel, the resultant permeability would reasonably be expected to be far different from a sand whose grains were the same size, or sizes, and were spheres. All sand grains, in fact, probably lie somewhere between these extremes, and with their resulting fundamental permeability values varying in accordance with the degree with which they approach one shape or the other.

If all of the grains were of one size, we would expect the permeability to be very much greater than if the spaces between the larger grains were well packed with small ones. It has been shown mathematically, not only that this should be the case, but that the permeability should vary, in any particular sand, inversely as the fourth power of the percentage of small grains in the aggregate.

To put this information to work, it is necessary to separate the sand grains without damaging them or otherwise changing their individual sizes. In cases where the cementing is slight, this is not difficult. Many oil sands, however, are bound together by siliceous cementing material, and are separated only with great difficulty. The usual procedure consists in crushing the sand clusters in a porcelain mortar with a porcelain pestle and screening with a set of standard sieves. The progress of the work is ordinarily observed with the aid of a microscope, and finally the sand remaining on each sieve is usually weighed on a chemical balance.

In observing the work of a number of manipulators, it was found many errors were introduced by faulty grain separations. The principal causes of such errors are: (1) Clusters not separated but treated as one grain (Figure 7); (2) clusters ground too much, and almost impossible of identification as such (Figure 7); (3) individual grains ground too much (Figure 8); (4) the crushing of individual grains (Figures 9 and 10).

Where the sand is well cemented we have not found it possible to do a perfect job of grain separation. A considerable amount of investigation,



Figs. 9 and 10—Bradford sand grains on and through 325-mesh sieve, including too many chips. Fig. 11—Clinton (Ohio) sand grains on 80-mesh sieve. Fig. 12—Butler County (Pennsylvania) sand grains on 80-mesh sieve. Fig. 13—Bradford sand grains on 80-mesh sieve

however, has led to the development of a technic which has enabled us to keep errors from the above sources to a minimum, and in certain cases to tend to balance each other. We have found that it is not a job for the laboratory "bottle washer." In fact, if the manipulator is not a person with a keen sense of trained observation, and judgment, the results are very likely to prove worthless.

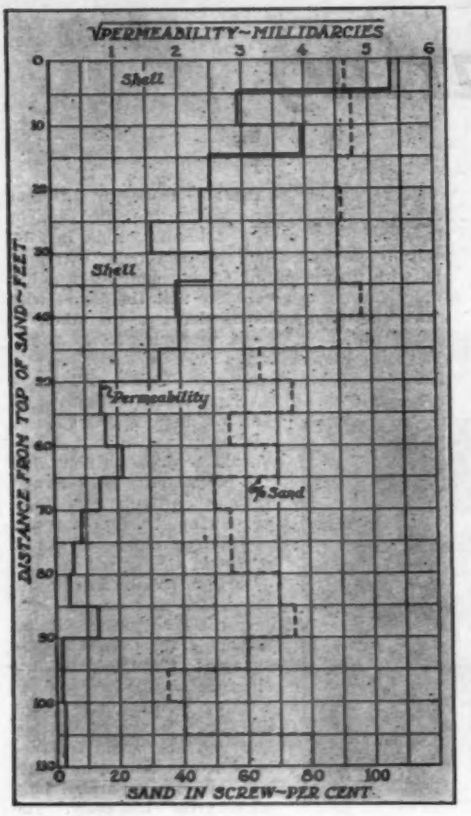


Fig. 15—Plat of well profile from drill cuttings using results obtained from screen method

Among the details necessary for worthwhile results may be included the following: (1) The sample should be as small as practicable, but not so small that material lost in the operation will introduce appreciable error. (2) Crushing must be done delicately and a very little at a time, the sand being sifted between each crushing, to remove separated grains before they receive too much treatment. (3) Pressure must be applied to the pestle with great caution. Often the weight of the pestle is too much for the sand, and may crush individual grains. (4) The grinding motion usual in pulverizing materials is used almost not at all. Three or four times around the mortar with this motion is often enough to reduce the size of grains sufficiently to enable them to pass through the next sieve. (5) Most of the crushing must be done with a rolling motion, similar to a wheel on a road. (6) The sand on the sieve must be frequently observed under the microscope to detect the grinding of grains as well as the separation of clusters. (7) The sand on the lower sieves must be observed for the presence of chips such as are shown in Figures 9 and 10. (8) To this all of the attributes of good general laboratory technic must be added.

We find the following procedure most effective: A sample of cuttings from the bailer is thoroughly washed and dried without scorching. The portion of this that lies on a 30-mesh sieve is placed under a bright daylight lamp and 100 or more clusters selected, to eliminate shale, mica, etc., to a total weight of one-half to 1 gram. This material is placed in a crucible and heated almost to a red heat, to burn out any oil remaining and to aid in the separation of the grains.

The first light crushing is followed by screening with all the sieves in the stack. That which remains on the coarsest sieve is checked for clusters, the crushing repeated as necessary until no clusters remain on the coarsest sieve. With that sieve removed, the process is repeated with increasing care and inspection to avoid grinding and crushing of grains, removing the coarsest remaining sieve when it is ascertained that it contains no clusters and no smaller material. Considerable time and effort must be spent on the finer sieves, to complete the segregation of the sizes, and the sieve or bottom just below must be dumped frequently to make possible the observation of the amount of material coming through. Experience alone can enable the manipulator to determine the minimum time and work for each operation without endangering the precision of the results.

With the grains completely separated, the usual weighing is carried out. We find that for ordinary work it is not necessary to weigh closer than to the nearest milligram. The greatest precision possible with the sieve does not warrant computing to the fourth decimal place.

We use only the following U. S. Standard sieves: 30 mesh with average openings .59 mm., 40 mesh with average openings .42 mm., 60 mesh with average openings .250 mm., 80 mesh with average openings .177 mm., 140 mesh with average openings .105 mm., 325 mesh with average openings .044 mm.

The use of the coarser sieves minimizes the amount of unnecessary work done on grains already separated.

The following formula has been developed empirically, and based on a large amount of experimental work and on permeabilities made by the usual methods on specimens from cores:

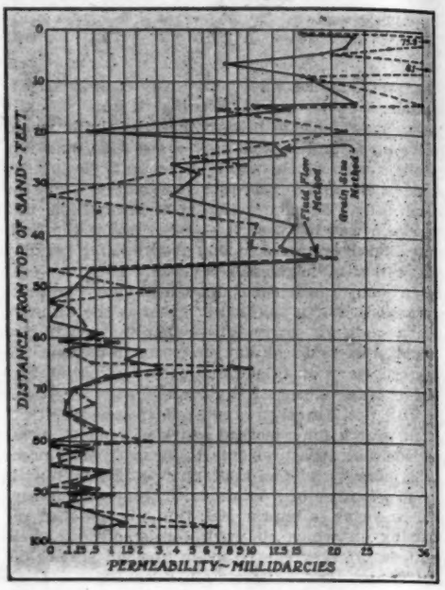


Fig. 14—Comparison of fluid flow and grain size methods of permeability measurement

$$\text{Millidarcies} = 100\left(\frac{L}{L + \frac{S}{4} + 4B}\right)^4$$

Where L = Total weight of all sand on 140-mesh sieve and larger mesh sieves.
S = Weight of sand on 325-mesh sieve.
B = Weight of sand on bottom.

This formula has been developed using the type

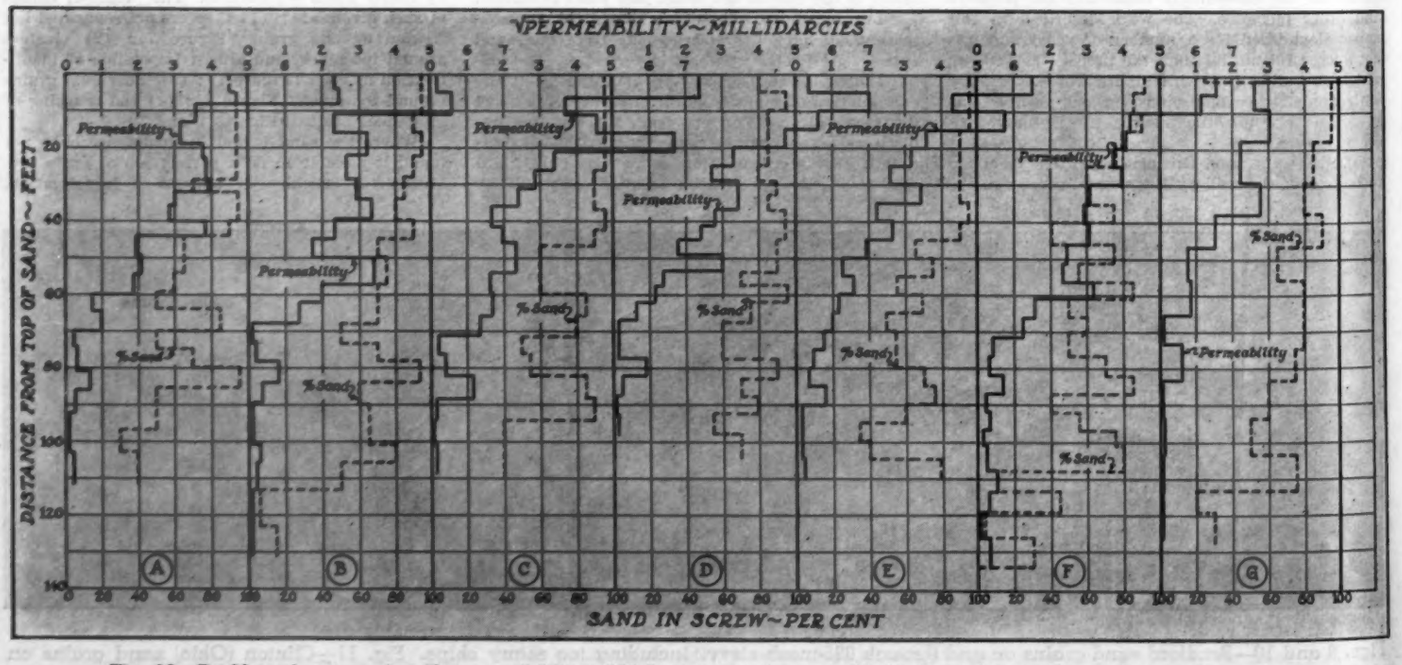


Fig. 16—Profiles of a row of wells spaced 200 to 300 feet apart showing the horizontal variation in the sand structure

of sand shown in Figures 1 to 6, inclusive, and found in the northern part of the Bradford field. Since no factor is present which will correct for grain shape, or variation in the amount of cementing material, it is not to be expected that this formula will fit other sand conditions. And, to the extent that it has been tried, it doesn't. The 140-mesh and 325-mesh sieve sizes are critical to the working of this method, and there is no reason why other sizes would not be required for other sands. We have not tried this, but feel that there should be no reason why a properly developed formula cannot be worked out for any desired sand.

Figure 11, Clinton (Ohio) sand, and Figure 12, Temple (Butler County, Pennsylvania) sand are examples of two sands very different from the ones on which we have done this work. The formula cannot be used on these sands without modification. Even the sand shown in Figure 13, from the southern extremity of the Bradford field is characteristically quite different, and requires changes in the formula here given.

In Figure 14 will be found a comparison between the permeabilities of a core taken at the extreme north end of the Bradford field, determined by the method here given, and also the usual fluid flow method. The striking similarity of the curves is self-evident. However, there are some definite differences between the two curves, even though, in this case, the sample used in the screen method, instead of being selected from drill cuttings, was taken from a position as close to the comparative permeability specimen as possible, and in the same bedding planes.

In considering these curves, it must be remembered that the permeability of this sand varies greatly from point to point, both vertically, as evidenced by this curve, and horizontally, as will be shown presently. From a practical viewpoint, and with no attempt at apology, it would be just as useless to be concerned with tiny variations here as it would be to use a chemical balance to weigh out the ingredients for a pie. And further, if this were not the case, in actual operation there is nothing we can or need to do, so far as the present state of the art requires, which makes necessary or important a fine determination of permeability.

With this in mind, we submit, that the two curves are in sufficiently close coordination for all practical purposes, and the screen method does not require a core.

As for the deviations, specimens have been found with small shaly spots, as mentioned above. Also a specimen was found with a rather large shell partially obstructing it. In all such cases, the permeability value as found by the standard method is much lower than by the screen method. We feel that in such sands the screen method is by far the more accurate. The effect of such inclusions would be to decrease the effective sand thickness, rather than its permeability.

Again, upon examining carefully the sand we find that it contains mica plates. This is not uncommon, but our interest lies in the fact that these plates are concentrated in varying numbers of very thin bedding planes, all plates laid flat, and in sufficient numbers so that the sand breaks very readily along these planes, and the resulting exposed surfaces strongly indicate the possibility of low resistance to the movement of fluids. In every case where these mica planes are present, the permeability as determined by forcing a fluid through a specimen is higher, generally very much higher, than by the screen method. In the core here considered, mica planes in varying numbers were found at the following depths in the sand: 1.5 feet, 7 feet, 51 feet, 57 feet, 80 feet and 96 feet. The correlation may be a coincidence; we suspect it is not, and expect to investigate this point further If this theory is correct, we feel again that for our purposes the permeability as determined by the screen method is preferable to the other since it indicates the nature of the sand itself as regards flooding requirements, and also since the number of mica planes which might occur in a particular flow specimen would depend on fortuitous circumstance. If the specimen were cut an inch higher or lower, the results might be very different, or if cut a foot or two to the right or left, for that matter.

The two conditions described above indicate a preference for the screen method. The difference in the curves at the point about 66 feet in the sand is caused by another condition. Here the manipulating of the sand in the mortar definitely indicates a lack of cementing material, with respect to the amount found elsewhere. It is indicated that the screen method does not provide for this condition, and that the permeability values so determined are much too low. At the present time this seems to be a weakness of this method, and can only be corrected by the ability of the manipulator in observing this condition, and arbitrarily adjusting his figures accordingly. This is not very satisfactory, but seems to be the best we can do at the moment.

In the every-day use of the screen method, the results are not carried out to the actual millidarcies, but rather to numbers which express the square root of the actual permeability, as these seem more convenient. Figure 15 is an example of the form these curves take in our operation. Each determination is the average for the length of the screw drilled, approximately 5 feet, and is so shown on the curve. On this same sheet is plotted a similar curve, since this sand contains shaley breaks, showing the estimated percentage of actual sand thickness in each screw. Also at times we add a third similar curve showing the estimated oil saturation of the sand as indicated in the washing and firing of the drill cuttings. And finally are added notes, as shown, indicating the position of any special features, such as shell, white sand, etc.

With this information before us, all obtained without the aid of a core, we feel that we have a very useful profile of the well, and one that greatly assists us in the proper shooting of the well, and in the general economic prosecution of the flood.

As evidence of the horizontal heterogeneity of the sand, Figure 16 is included in this work. It presents a series of actual curves similar to Figure 15, for a row of wells, over 1,000 feet long. The horizontal variation in sand structure is self-evident. From this series of curves, the need for an accurate knowledge of sand conditions from well to well is obvious. It is just as apparent that coring all of these wells would be an expense not to be undertaken lightly.

The time required for a single permeability determination is approximately one hour, which means that for wells of about 100 feet total sand thickness, about three days are required to complete a well test. This effort appears to us to be well worth while. The glycerin saved in what would otherwise be necessary shooting of unproductive sand often pays for the analysis.

We submit, then, that the screen method here discussed, although empirical throughout, and subject to various weaknesses, does have a very useful place in the economic flooding of such properties as have come to our notice, that it does not take the place of other careful methods, but rather supplements such and carries that work to a greater sphere of usefulness in the every-day operation of a flood property.

We wish to express our appreciation of the work done at the Pennsylvania State College, without which this method could not have been developed. Mr. Donald May has done much of the laboratory work and critical examination here discussed.

New Equipment and Processes Feature at Power Show

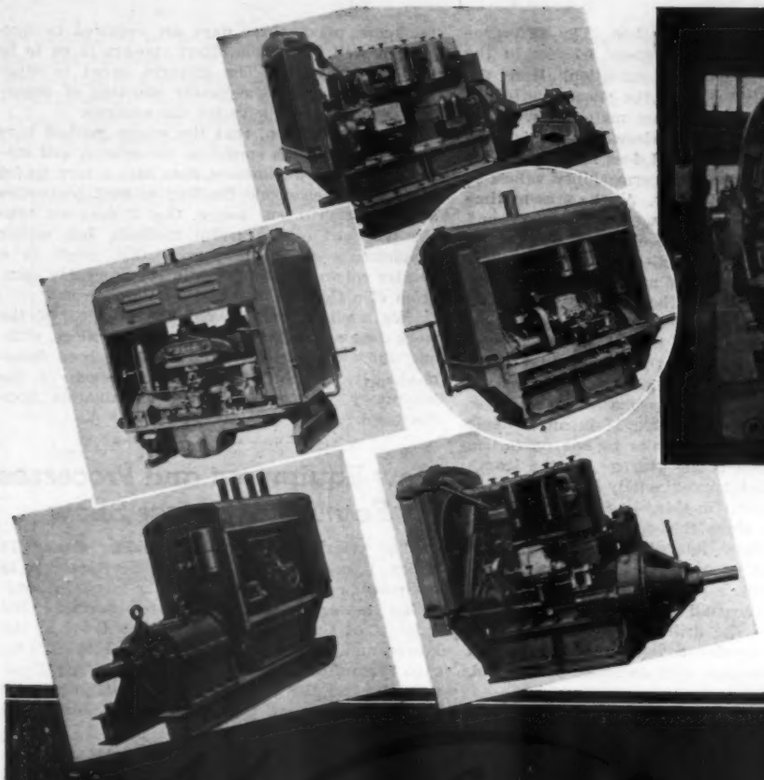
The colorful spectacle of welding flames in action, augmented by the newest developments in equipment and techniques, and the latest in hard-facing materials and procedures featured the exhibits of Union Carbide & Carbon Corp. at the Power and Engineering Exposition held in Chicago from April 20 to 24. The Linde Air Products Co. and the Haynes Stellite Co. represented the corporation at booths in the International Amphitheater.

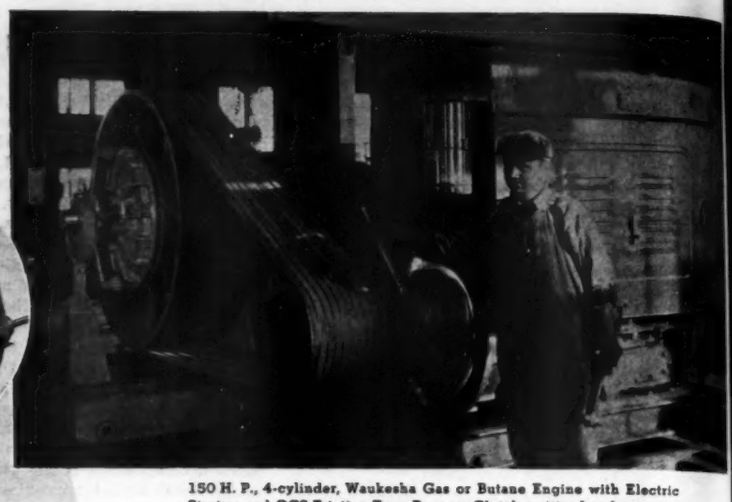
The rapidly increasing importance of valves capable of efficiently handling high-temperature, high-pressure steam made the Haynes exhibit an extremely interesting one to all power and industrial engineers and plant maintenance men. It has long been realized that the capacity of any system under pressure is determined by the capacity of its valves and this usually means the ability of seating surfaces to resist corrosion, galling, scoring and wire drawing.

One of the centers of attraction at the Linde booth was a live demonstration of Lindewelding pipe. This emphasized the speed and perfection of the joint which is obtained with the latest apparatus and methods. New oxygen and acetylene regulators, which were shown for the first time, created a great deal of interest.

NO SHORTAGE OF WATER—NO SHORTAGE OF OIL

The Standard Oil Company of Louisiana has operated this unit for more than five years, the entire structure being built on cypress piling ten to twelve feet above the bottom of the Jeems Bayou in Caddo Parish, Louisiana





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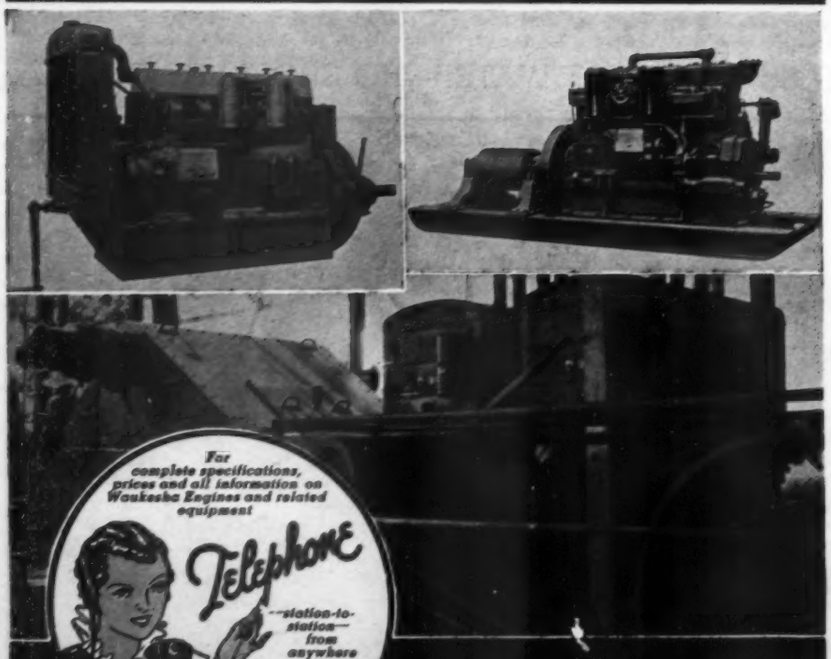

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CABLE TOOL DRILLING
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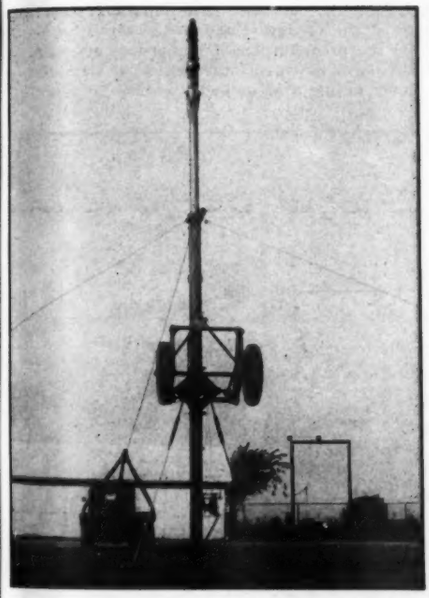
OPERATING IDEAS

Telescopic Pulling Mast

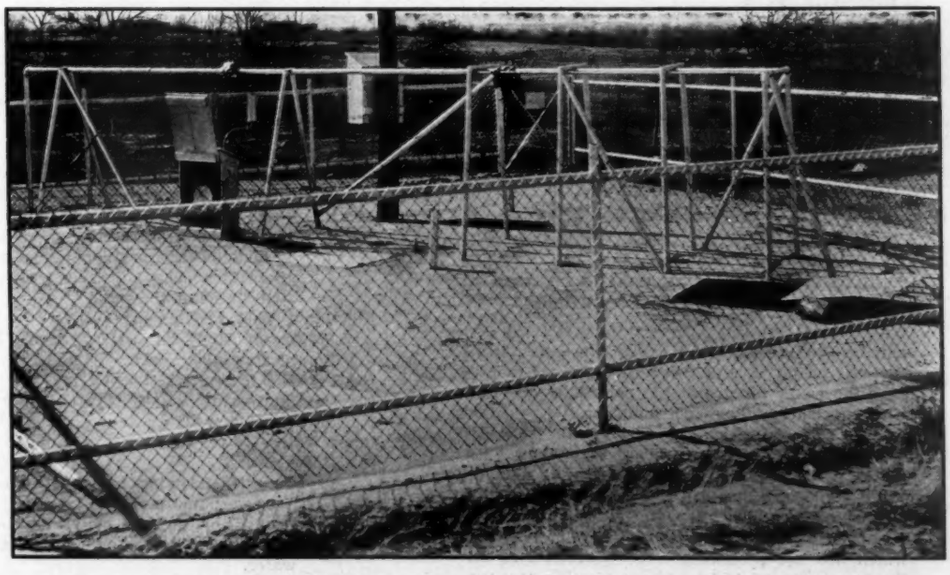
Compactness and portability are the two outstanding features of the portable pulling mast used by a major operator in producing areas for pulling rods and tubing in shallow wells. It is built of 10-inch and 8-inch casing and so constructed that the 8-inch section forms the top part of the mast and is seated in the top end of the 10-inch section of the mast in such a manner that it may be extended for pulling operations and retracted in a telescoping manner when in transit. An ordinary trailer was used and with suitable supports and bracing made of pipe a cradle to hold the mast was fashioned by welding as shown. This permits the pulling unit or truck to pull the mast from job to job with little difficulty.



The base of the mast is formed by welding a piece of pipe across the bottom of the 10-inch pipe in the form of a tee to give sufficient footing to carry the load imposed by pulling tubing or rods. The center of the mast is guyed to the ends of this footpiece to give greater rigidity. Each well is provided with a concrete pad of adequate dimensions to support the foot of the mast and to carry the load in lifting the rods or tubing, or both, in case of "stripping" jobs. The method of extending the mast to its full height is by use of the small hand winch mounted on the side of the mast near the base. The lifting cable extends from this winch to the small pulley on the top of the 10-inch section, passing over it and then down inside the 10-inch to the bottom of the 8-inch section where it is fastened. By turning the winch the upper section of the mast is raised or lowered as the case may be. On raising the upper section of the mast it is held in position by two steel lugs placed midway between the trailer and top.

Flood Lights Installed to Illuminate Boiler Gauges

To provide better illumination for its battery of boilers one large oil company operating rotary tools in the Ada field has installed floodlights in the pump shed and focused a beam on each boiler. The lights are of especial value for lighting the steam pressure and water level gauges; however they are adjustable, and the beam may be reversed to flood the feed water pumps in case repairs need be made. Also they may be focused on the rig for illuminating any work taking place there. This installation not only saves time for the boiler man but is also a safety measure since the gauges are readable at a much greater distance.



Company Injects Crude Oil into Natural Gasoline Line

A natural gasoline company operating several natural gasoline plants in the greater Seminole area has installed a devise to discourage thieves from tapping its gasoline line for automobile fuel. As this company refines all natural gasoline manufactured by its plants in this area, they conceived the plan of blending sufficient quantities of crude oil with the gasoline to make it undesirable for automobile fuel. Therefore at a point where their crude and natural gasoline lines crossed, the installation for blending shown in the accompanying photograph was installed. The heart of the system is an orifice meter which allows 5 per cent of crude oil to be injected into the natural gasoline line. Since this practice has been put into effect the line has not been tapped and the need of a line walker is no longer required.

Oil Producers Making Rapid Progress in Salt Water Disposal Programs

By HAROLD K. IHRIG

The work necessary to dispose of salt water produced with crude oil varies from one field to the next and often entails extensive engineering research and experimentation. Problems involving chemical questions of great magnitude must be taken in hand and solved in order to make the disposal method used one that will operate over a period of time with as little detrimental effect as possible on the various operating and economical factors.

At the present time the trend in this work is toward underground disposal. By underground disposal is meant the disposing of salt water in those stratigraphic formations that are conducive to those particular operations.

The requirements placed on those formations to make them suitable for satisfactory disposal of a given amount of water are varied and compli-

Drilling salt water input well to be used in disposing of production wastes

cated. The greater the porosity the better they suit the condition and the work required to prepare the water for disposal is materially lessened. Those formations having a high porosity and low or even zero saturation are of course the most desirable as disposal areas. Those formations with a low porosity are avoided as much as possible in disposal wells, but are ofttimes the only available source to which salt water may be piped.

In those areas now known productive, but which are not producing large quantities of oil the enactment of legislation prohibiting the use of streams as means of disposing of salt water would mean the absolute abandonment of those fields, as they would not pay the great expense necessary to dispose of the water underground should geologic conditions of the region be favorable to such procedure. There are producing fields in which it is known that there is no possibility of returning salt water to either the producing formation or to nonproductive horizons.

Aside from the disposing of salt water in barren formations there is another side to the question wherein the water may be returned to the low side of producing structures and by introduction at that point effect an artificial water flood. Where the selected input wells in the producing formation are off structure, this method will serve a twofold purpose: first, the disposal of the salt water; second, as a means of increasing the ultimate recovery of oil by a controlled water flooding. Due to the success of water flooding in the Pennsylvania and several Mid-Continent areas, the use of water disposal wells should be encouraged throughout the Mid-Continent fields, particularly in certain sand and limestone formations. In other formations, the excessive pressure required to introduce the water will neither justify the expense nor the hazards of polluting either oil or fresh water horizons by breaking through the casing strings.

The use of input wells in certain fields appears to be the most logical manner in which to successfully handle any disposal project, and it may be stated herein that the best apparent method of arriving at a program that will prove to be complete and satisfactory is the forming of a community disposal project, in so far as disposal of salt water is concerned, and a cooperative method of disposal evolved. This procedure would eliminate the danger of one offender penalizing all of the operators in the field for an improper disposal method. This conclusion is based to an extent on the information gained through the intensive study that has been given the subject of water flooding. This water flooding program has, in the main, dealt with the use of fresh water as a flooding agent; consequently, it has been necessary to devise a different procedure for the use of salt water. The following outline, as suggested by one major operator, illustrates the necessary data to be obtained after a study of subsurface conditions has warranted the selection of an input well:

1. Salt Water Analyses.
   - (a) Water samples before starting project.
     - (1) From each well producing water.
     - (2) From each lease receiving tank.
   - (b) Water samples after starting project.
     - (1) Periodic checks, particularly when there is a change in the production status of the wells.
2. Individual Well Production (Oil, Gas and Water) of All Wells in the Project.
   - (a) Before starting project.
   - (b) Periodic tests after starting project.
   - (c) Date and nature of any change in production of a well.
3. Input Water.
   - (a) Daily report.
     - (1) Quantity introduced (in barrels).
     - (2) Average pump pressure.
     - (3) Pounds or gallons of chemicals used in conditioning or identifying water.
     - (4) Lease production (oil, gas and water).
     - (5) Complete details as to shutdown time or leaks in the system.
     - (6) Systematic checks of all wells for the appearance of dye.

The proponents of fresh water flooding have emphasized the necessity of conditioning the input fresh water before its introduction into the well. These problems become more acute with the use of salt water, hence, the necessity of a careful chemical control of the input water to avoid plugging the pores of the formation. Chemical analyses of oil well brines usually indicate them to be turbid and to contain large amounts of iron either in suspension or solution. In some cases, aeration may suffice to precipitate the iron in solution. A practical and economical treatment is the addition of the necessary amount of sodium hydroxide solution to the water which will precipitate the iron in the form of iron oxide. The iron oxide settles out as a sludge, and during the process of settling will carry down all suspended material. It must be remembered that aeration will increase the corrosive action of the water while alkalinity will tend to decrease the corrosiveness. In cases where there is a dissimilarity in the chemical composition of the input water and the water from the producing formation, a chemical determination should be made of the mixing of the two waters in order to avoid the precipitation of carbonates and sulfates in the pores, or on the surface, of the formation.

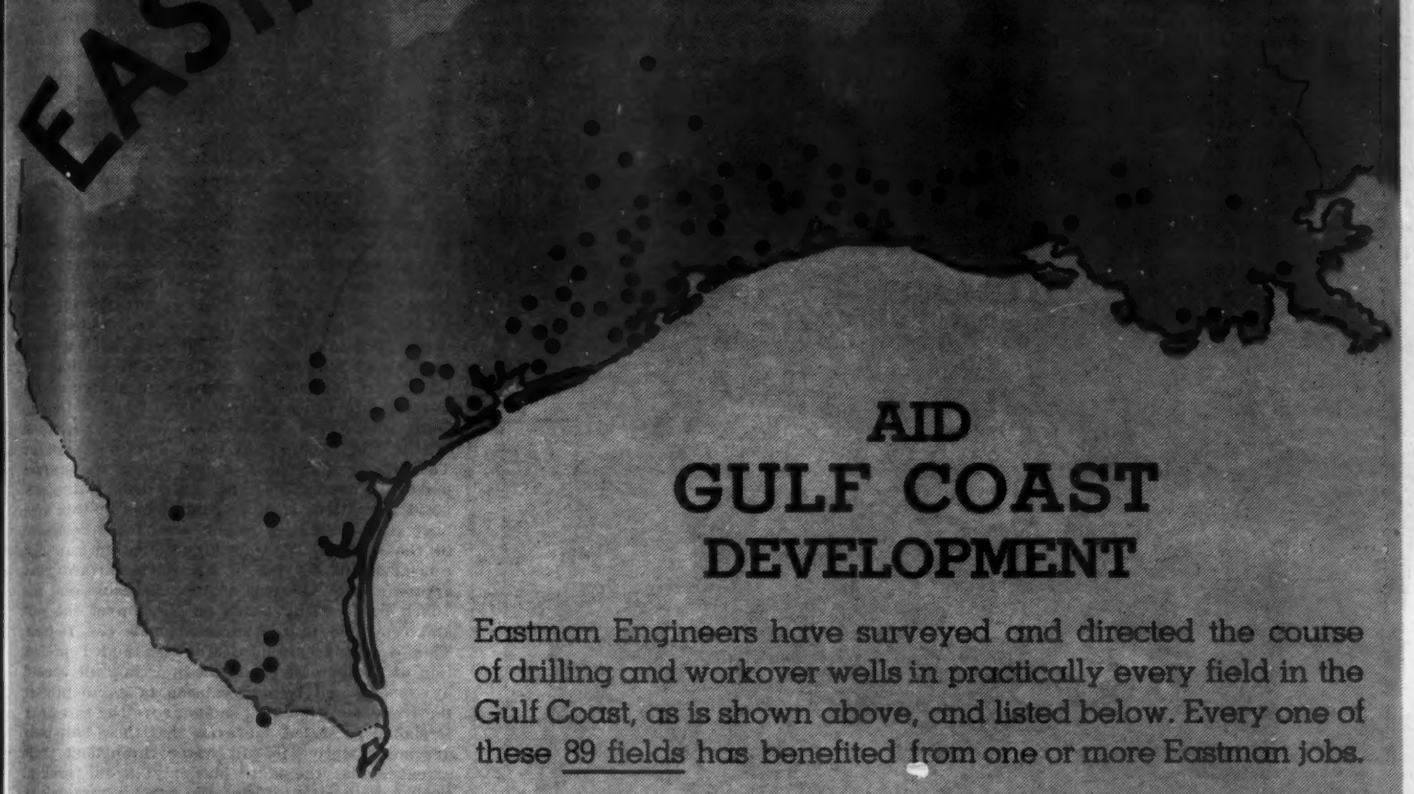
In handling a great many waters for return to

Salt water input well in the Mid-Continent that has been in service for five years

underground disposal, some operators contend that the "closed system" of handling the water, in the lease tanks and to the input well, will keep it in the same chemical balance as it left the formation also, since the water is never subjected to aeration there is little opportunity for oxidation. Certain waters, however, need treatment for removal of certain compounds and conditions. An excess of iron, as stated, is detrimental, turbidity should be overcome, and an excess of calcium carbonate must be removed to protect the porosity of the formation into which the water is being put. The water carrying hydrogen sulfide is usually aerated in an attempt to liberate that compound because of its corrosive characteristics.

There are at present several different type plants in operation, built to handle the particular water produced in the area surrounding its location. One type of disposal plant now under construction will consist of a gathering system of asbestos cement pipe, a large concrete lined pit equipped with a series of baffles in such a manner to cause a slow, even flow of water through the pit to permit the settling of any substances causing turbidity, and at the same time aerating the water

EASTMAN OIL WELL SURVEYS and CONTROLLED DIRECTIONAL DRILLING



AID GULF COAST DEVELOPMENT

Eastman Engineers have surveyed and directed the course of drilling and workover wells in practically every field in the Gulf Coast, as is shown above, and listed below. Every one of these 89 fields has benefited from one or more Eastman jobs.

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Ariola
Bay City
Barbers Hill
Batson
Beeville
Big Creek
Big Hill
Bloomington
Blue Ridge
Boling
Brazoria
Bruni
Buckeye
Citrus Grove
Cleveland
Conroe
Dacus
Danbury
Dickinson
Edinburg
Freeport
Galveston
Greta
Hastings
Hankamer
High Island
Hoskins Mound
Hull
Humble
Liberty
Livingston
Louise
Manvel
McAllen
Markham
McFaddin
Mission
Mykawa
Orchard
Pettus
Pierce Estate
Pierce Junction
Placedo
Pledger
Port Lavaca
Port Neches
Premont
Rattlesnake Mound
Sam Fordyce
Seadrift
Silsbee
Sinton
Sour Lake
South Houston
Spindle Top
Stratton Ridge
Tomball
Trinity
West Columbia

OLD MEXICO—
Reynosa

LOUISIANA—
Bayou Bouillion
Bayou Mallet
Black Bayou
Bosco
Caillou Island
Cameron Meadows
Cheneyville
Darrow
Four Isle
Gueydan
Hackberry
Iowa
Jefferson Island Dome
Lake Barre
Lake Hermitage
Lake Washington
Leeville
Lockport
New Iberia
Roanoke
Sorrento
Stark Dome
Sulphur
Tepetate
Vinton
Welsh
White Castle

Eastman OIL WELL SURVEY COMPANY

as effectively as possible. It is expected that water entering this pit with solids in a flocculent state will be clear and clean on leaving the pit for the disposal well. Specifications also call for skimming connections in the side of the pit to skim off any accumulated oil that might have accompanied the water from the treating tanks in the field. To those unfamiliar with the cement pipe referred to the selection of this type equipment may seem questionable, but investigation will bear out the judgment of the engineers selecting the equipment. The primary purpose of the cement pipe is to avoid corrosion troubles in handling highly mineralized waters. A problem secondary only to water corrosion is that of soil corrosion which is encountered in most sections of the country. Stray electric currents break down pipes made of materials which are conductors of electricity. Soils of low dielectric strength contribute to this situation. The nature of the material used in the manufacture of asbestos cement pipe, being nonmetallic, precludes the possibility of electrolysis affecting the material, and is without basis for corrosion from corrosive waters or soils.

Another type of water disposal method being used at the present time but which is still in the experimental state is the use of an aerator and a stabilizing filter. The water is aerated to dispell the hydrogen sulfide the water carries, and is then put into the filter where chemical treatment is in continuous progress. Together with the elimination of the hydrogen sulfide the main purpose of the filter is to stabilize the carbonate content of the water. If the water is carrying too little calcium carbonate it is corrosive and in being put down the casing in the well sets up a corrosive action which is harmful to the casing and also has a detrimental effect on the formation in carrying various iron compounds, some of which are insoluble, to the sand face and depositing them there and affecting a seal. On the other hand if the water is carrying too much calcium carbonate it will be precipitated within the pipe lines and casing carrying the water and also on the face of the receiving sand with the resultant effect of plugging the pores of the sand. This filter is capable of stabilizing the carbonate content of the water at the exact point of equilibrium by allowing the water to wash through a calcium carbonate sludge line built up within the filter. Should the water be high in the carbonates the excess is withheld, and in case it is lacking in that compound the water picks up the correct amount of carbonates from the sludge and the water leaves the filter in a stabilized form. This manner of correcting certain chemical qualities of salt water is proving much better than the process whereby it was attempted to correct this condition by the addition of chemicals, as the question of whether the proper amount of chemical was being added was always paramount, and without frequent testing this could not be determined.

Salt water is being disposed of in the Burrton area of Kansas by returning it to an underground formation without any treatment whatever, with the precaution, however, of a "closed system" of handling the water from the producing oil well to the input well. Input wells are drilled to a depth of about 460 feet to 500 feet, and bottomed in the salt beds of the Wellington formation, the upper part of which is composed of shale and the lower strata is designated as "salt beds." Geologically this strata is classed as the upper division of the Big Blue group of the Permian system. The failure of the salt to crop out at the surface makes it doubly desirable as a salt water disposal formation. Most disposal wells in this area have three strings of casing, each being cemented to the surface. It is usual practice to run and cement about 40 feet of 15½-inch surface pipe, approximately 425 feet of 10-inch casing and the 7-inch input string is set on the top of the salt and cemented to the surface inside the 10-inch. This casing program affords the added protection of the excessive amount of casing all backed by cement, and is a precaution taken to protect the fresh water bearing sands above the salt beds. It should be stated, however, that these salt beds are not receptive to salt water throughout their extent across the state but only in the broken, eroded section that forms the eastern extremities of the formation.

Numerous other projects in the state of Kansas are using the basal part of the Silicious or Arbuckle lime as a disposal formation, and are proving successful in disposing of large quantities of water. The water is given little or no treatment in most cases.

There are several projects in operation in Russell County, Kansas, and at the present time are operating satisfactorily, considering the fact that it is necessary to pump the water into the wells; the projects mentioned heretofore all taking water by gravity. Those disposal projects in the Russell County area are using the Cheyenne or Commanchean sandstone which underlies the Dakota sandstones and is found at a depth of about 450 feet to 500 feet in that area. It carries a very brackish water that is unfit for any domestic or industrial use so the addition of salt water offers no detrimental effects whatever.

While a great many disposal projects are returning water to barren or salt water bearing formations there are also a number of disposal projects in operation wherein the water is being returned to oil producing formations with considerable success. These projects are serving as a satisfactory method of taking care of brine produced with the oil and will also serve as a modified form of water flooding. There are several instances in the state of Kansas where operators have either noticed small increases in production or at least noticed that the normal decline of the production has ceased, and production rates are remaining constant. Whether this can all be attributed to the form of water flood effected by returning salt water to the producing formation or not is difficult to state with any degree of certainty, perhaps repair work, cleaning out and allied operations have had their effect on the daily production but at the same time the increase coming at a time when the operators were expecting such results from their disposal work makes the problem most interesting.

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Blow-Off Protection Cap Developed to Remedy Gas Line Thieving

By W. M. SARTAIN, JR.

A remarkable and novel device has recently been placed on the market to correct and possibly eliminate two of the worst troubles of the operator of a high pressure gas line.

The first of these troubles, condensation in the line, could be more easily handled were it not for the second, gasoline thieves. Heretofore, any blow-off or drip placed in the line to rid the line of the condensate or gasoline was easily accessible to these gasoline thieves who caused untold damage, down time, expense and waste of gas by breaking any lock placed on the drip and damaging the valve beyond repair.

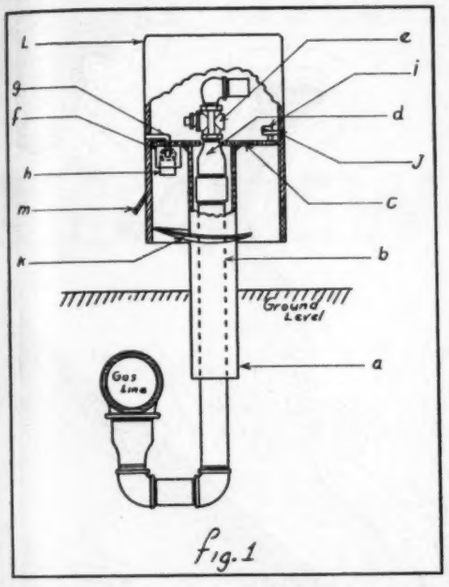


Fig. 1

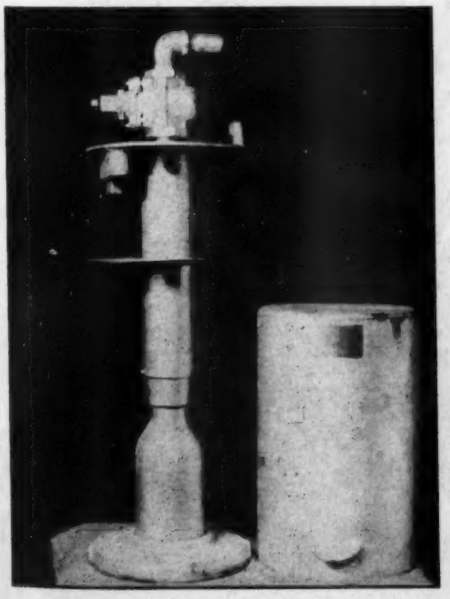
Cross-sectional drawing of guard in place

By utilizing the unique feature of a new guard cap for gas line blow-offs, it has been demonstrated that locks can now be placed on the blow-offs and protected in such a manner that they cannot be reached to break them without damaging the whole gas line in such a manner that it would defeat the purpose of the meddler and endanger his life.

The main function of this device is to provide a cap which can be easily and readily placed over the valve to be protected and prevent any tampering with the valve. Another feature is to provide a lock for the cap and place it in such a manner that it cannot be reached to remove except with a proper key. These ends are adequately gained by the peculiar construction of the guard cap.

The guard cap Figure 1 consists of a 3-inch shield pipe (a) to be placed over the 2-inch blow-off line (b). A flat round shield plate (c) welded to the top and perpendicular to the shield pipe reduces the opening of the 3-inch shield pipe just enough to allow the neck of the swadge nipple (d) on the blow-off pipe to pass through. By screwing the valve (e) on the swadge nipple it is now impossible to remove the shield pipe. Since the shield pipe is free to move in the ground it is impossible to get to the blow-off line in any manner.

Blowing off drip after cap is removed



Close up view of guard cap and base

The shield plate has an oblong slot protected by a flange shield (f). When the cap is placed in the locking position, a finger (g) on the cap fits in this slot and when a lock (h) is placed through the eye of this finger the cap cannot be removed. The lock is protected by the flange shield surrounding the under side of this slot. Diametrically opposite the slot is a hook (i) with a laterally extending bill. When the cap is placed on and turned, just as the lock finger drops into the slot a pin (j) in the cap engages this hook and the cap is held securely by the lock through the finger and by the hook holding the pin. Just below the upper shield plate and directly below the lock slot, there is another segmental shield (k) welded to the shield pipe so that it extends slightly upward from horizontal, and its outer edge is in line with the edge of the top shield plate. It extends in an arc greater than 180 degrees and its function is to protect the

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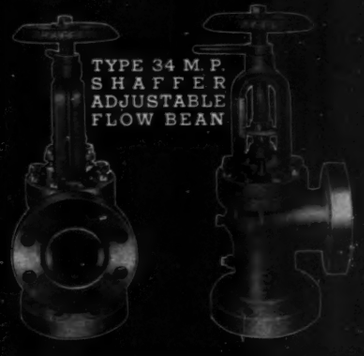

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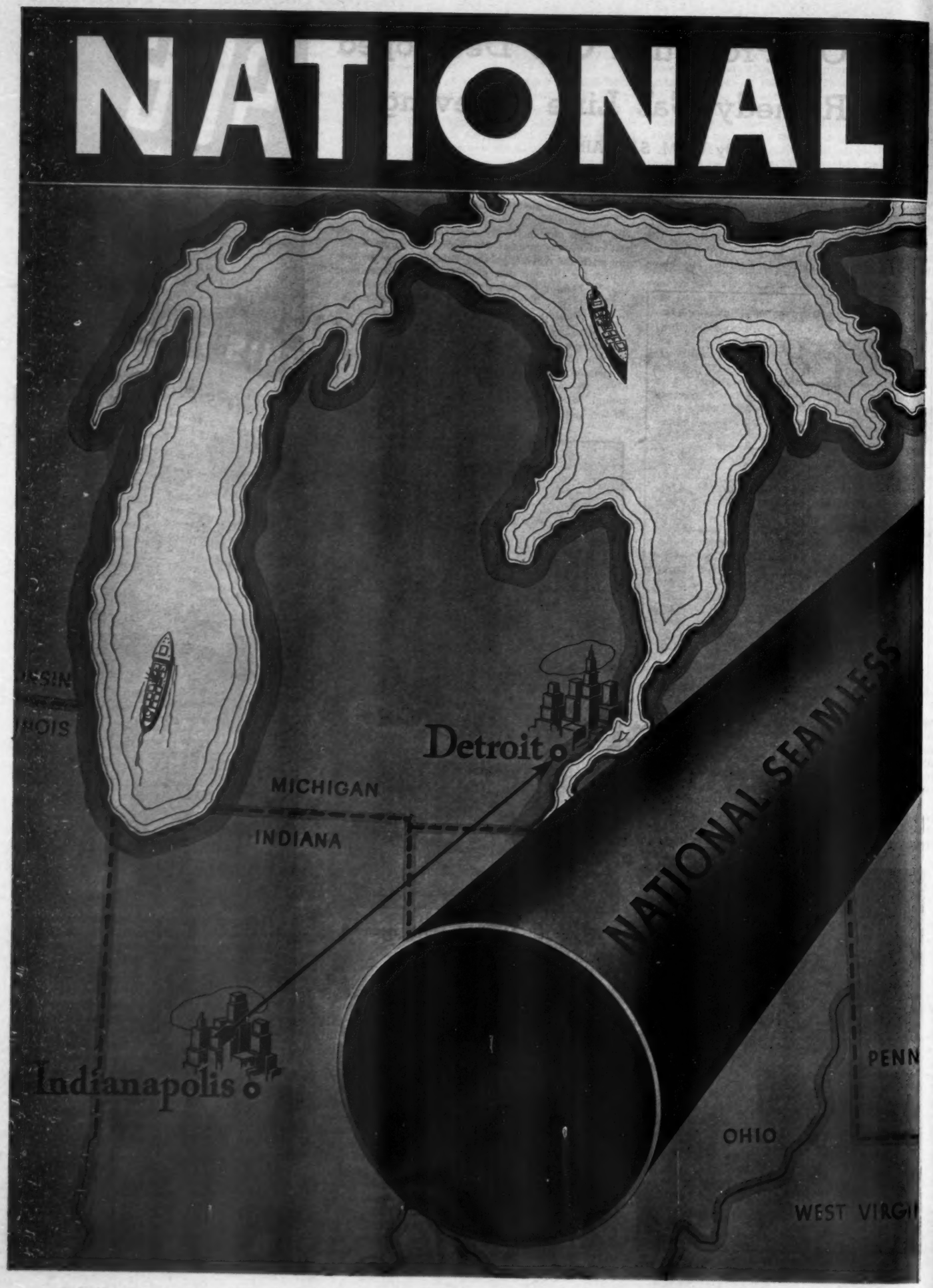
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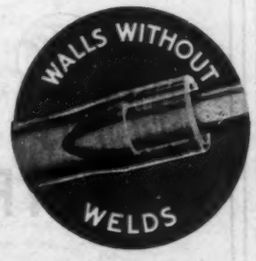

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lock from access below. The cap (1) is made of 9-inch casing and is of sufficient weight and thickness to discourage any means of attacking it.

To put the cap on it is only necessary to pick it up, place it over the valve, lower it until the lock finger and the pin touch the shield plate, rotate the cap until the finger drops into the slot and the pin engages the hook. Then by reaching up through the arc left by the segmental shield one can reach behind the shield pipe and place a padlock through the finger and lock.

A handle (m) is placed on the outside of the cap on the side of the lock finger so that when the padlock is removed the cap can be tilted to raise the finger out of the slot so that the cap can be rotated to disengage the pin and hook, and cap can then be lifted off. Then operator can use the valve to blow-off condensate.

By using this guard cap an operator can place more drips in a line without fear of damage to equipment by gasoline thieves and thus eliminate his two worst troubles, condensation and tampering.

The simple construction of this cap and its general ease of handling makes it an ideal practical device. It has been tried in the Okmulgee and Seminole, Okla., districts and all reports are not only favorable but enthusiastic.

Apparatus for Vapor Pressure Uses Variable Gas Volume

A barometric type of vapor pressure apparatus having a variable vapor volume was described in a paper prepared by Everett M. Barber and A. V. Ritchie of the Texas Co. before the meeting of the petroleum section of the A.C.S. which met in Kansas City last week. The apparatus offers a rapid and accurate method for determining the initial vapor pressure of liquids having such vapor pressure falling within the range of 800 to 900 mm. of mercury. The data to be derived from the use of this apparatus is especially helpful in calculating evaporation losses and in measuring the vapor locking characteristics of gasolines. The schematic diagram showing the construction of the new apparatus is shown below. The open tube, the buret and the leveling bottle, which constitute the essential parts of the measuring system, are filled with mercury and in order to obtain temperature control are immersed in a thermostatically controlled water bath which has a very narrow temperature gradient.

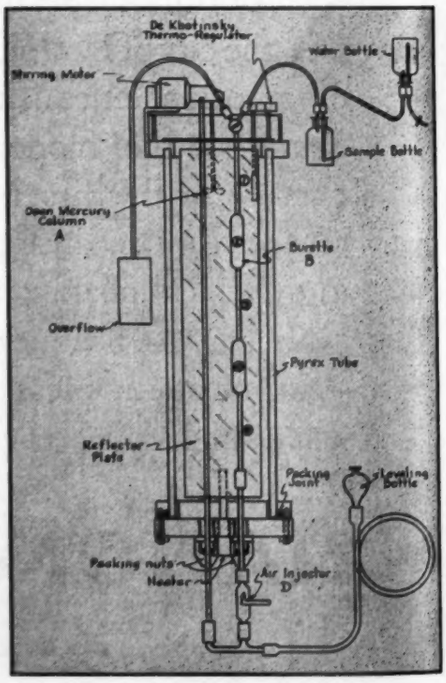

Diagram of vapor pressure apparatus

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TECHNICAL ABSTRACTS

Chlorinated Paraffin: Products of Dechlorination

By M. B. PENN and F. T. GARDNER
University of Tulsa

Before Kansas City meeting of American Chemical Society

Chlorinated paraffin is readily dechlorinated by heating to temperatures of the order of 300° C. Some properties of a series of samples obtained by dechlorination of starting materials of three different chlorine contents are presented. Chlorine elimination results in the formation of some unsaturated linkages, considerable ring closure, and in the formation of some asphaltic material. Increased initial chlorine content and increased temperature of dechlorination favor asphalt formation. Dechlorination in the presence of fuller's earth yields a low chlorine content oil of low viscosity index. Aluminum chloride accelerates dechlorination but promotes formation of asphaltic materials. The viscosity measurements indicate that over the range of 200-250° C. removal of Cl by double bond formation is the predominant reaction. Decreased viscosity paralleled by increased iodine number, while the chlorine content drops sharply, was explained by the assumption of the double bond formation.

Factors Which Influence the Selection of Metallic Soaps for Thickening of Mineral Oils

By C. J. BONER
Battenfeld Grease & Oil Corp.

Before Kansas City meeting, American Chemical Society

Of 18 metals combined with fatty acids, 9 gave metallic soaps which in turn produced lubricating greases that were worthy of consideration. While the entire metal field was not covered indications are that divalent combinations furnish the most promising and satisfactory bases for lubricating greases. Five of the metals in question, magnesium, calcium, strontium, cadmium, and mercury, being in Group 2 of Mendelieff's Periodic Arrangement of the Elements, are divalent. Three others, cobalt, lead and nickel, have divalent compounds. While the remaining metal, aluminum, according to the opinion of McBain and McClatchie does not furnish a trivalent soap but rather a mono or divalent. Thus we may conclude that divalent metallic soaps have the greatest possibilities as grease bases. Soaps of four metals, aluminum, cobalt, magnesium and nickel, gave greases which were clear or translucent, while the soaps of cadmium, calcium, lead, mercury and strontium, gave opaque greases. Since the first four are metals of comparatively low atomic weight and thus the metal content of their soaps is low, it seems probable that a low percentage of metal in soaps used in lubricating greases will tend to give a more nearly transparent grease structure. Study of the consistencies of greases obtained indicate that where the metal is more basic the softer the consistency of the thickened mineral oil. Calcium and strontium soaps were the only ones where it was shown that water was required to hold the soap in suspension. With other soaps in general one-half per cent of water tended to break down the structure. On all greases made, the dropping point was highest with the highest titer fatty acid combination. Likewise the greases made from soap containing high titer acids were always heavier in consistency than the low titer combinations. Soaps which formed a grease in naphthenic oil would also give a grease in paraffin oil. The latter produced a little less opaque grease but the difference in consistency was not appreciable.

Oil Oxidation: The Reaction Which Is Unaffected By the Product

By R. W. DORNTE and C. V. FERGUSON
General Electric Co.

Before Kansas City meeting American Chemical Society

The rate of oxygen absorption in a circulatory system is applied to a study of lubricating oils whose oxidation is unaffected by the nonvolatile oxidation products. All experimental results can be represented by a simple empirical rate law: The total oxygen absorbed is a linear function of the time at constant temperature. The rate of oxidation varies nearly linearly with the partial pressure of oxygen. The principal oxidation products are water and carbon dioxide; no carbon monoxide or peroxides are formed. It is probable that a chain mechanism is not involved in this oxidation. The net heat of activation for oils of this type varies between 19,000 and 43,000 cal. The catalytic effect of copper, iron, tin, and lead are studied by the oxygen absorption procedure. The catalytic effect of these metals depends upon the oxygen partial pressure and the ratio of metal to oil. For copper the rate of oxidation increases rapidly with the copper-oil ratio; for the other metals this ratio has only a slight effect. The net heat of activation for the catalyzed reaction has been determined for a fixed metal-oil ratio. These metals cause no significant change in the net activation heat although the rate of oxidation is increased several fold. This is due to the rather large error inherent in the determination of the heat of activation. The method gives a sound empirical evaluation of catalytic effects on oil oxidation.

Corrosion Test Methods in Use of Liquid Butane as Motor Fuel

By M. M. HOLM
Standard Oil Co. of California

Before Kansas City meeting, American Chemical Society

Experience in manufacture and sale of liquid butane for motor fuel service has shown that extreme care in avoidance of contact with possible contaminating materials is essential. The problem is peculiar to the specific equipment used for vaporization and carburetion of the liquefied gaseous fuel. In many cases, improper functioning of this equipment results from presence of such minute concentration of contaminant that detection by ordinary methods of analysis is impossible. A procedure is outlined for detection and qualitative identification of such contaminants. Results may be interpreted in terms of actual service conditions to which the fuel is to be exposed. An appropriate set of warning instructions is given for proper handling of liquefied gaseous fuels as follows: (1) All fuel tank openings, as well as vapor and liquid transfer hoses, should be capped when not in actual use. (2) When coupling hoses, care should be exercised to prevent entrance of any dust—it may be corrosive. (3) Rubber lining in transfer hoses should be avoided due to possible sulfur leaching. Flexible all-metal hoses or Duprene line hoses are preferred. (4) Valve lubricants should not be used. Although certain types are hydrocarbon-insoluble in the usual sense of the term, the solubilities are sufficient to cause trouble in the present service. (5) Welded pipe connections are preferred. In cases where threaded connections are unavoidable, joint dopes should be used sparingly with attention given to prevent them from entering the fuel system.

A Variable Vapor Volume Barometric Type of Vapor Pressure Apparatus

By EVERETT M. BARBER and A. V. RITCHIE
The Texas Co.

Before Kansas City meeting, American Chemical Society

This paper describes the design and operation of a barometric type of vapor pressure apparatus which is so constructed that the vapor pressure of gasolines to naphthas can be measured from zero to any desired intermediate per cent evaporated. While adaptable to routine tests, the apparatus is more accurate and reproducible than the conventional Reid vapor pressure test, and also gives more detailed information. In measurements of the vapor pressures of pure compounds, the I.C.T. values were checked to within 2 mm., and repeated tests on a single gasoline sample showed a probable (50 per cent) error of 1 mm. of mercury. Application of the results to the measurement of evaporation losses and to the measurement of the vapor locking characteristics of gasoline is briefly discussed.

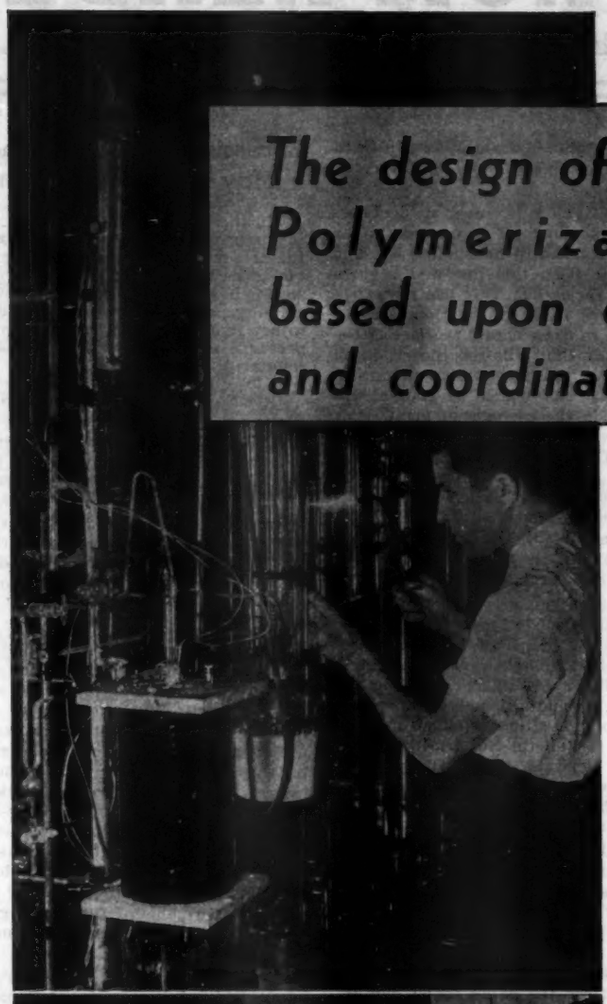
The Density of Hydrocarbon Gases and Vapors at High Temperatures and Pressures

By W. B. KAY
Standard Oil Co. (Indiana)

Before Kansas City meeting American Chemical Society

The P-V-T (pressure, volume, temperature) relations of 11 typical petroleum hydrocarbon mixtures in the gaseous state have been determined experimentally over a wide range in temperature and pressure extending from the saturated condition below to the highly superheated condition above the critical region. The P-V-T data on the mixtures are expressed as deviations from the perfect gas law and are correlated in this form by means of the theorem of corresponding states using a particular temperature and pressure for each mixture, termed the pseudo-critical temperature and pressure, for calculating the corresponding reduced quantities. It is shown in this way that the P-V-T relations of complex hydrocarbon mixtures can be calculated from the P-V-T relations of a pure hydrocarbon. Methods and charts for estimating the pseudo-critical temperature and pressure of a petroleum mixture are given which make it possible to calculate its P-V-T data over a wide range of temperature and pressure. The accuracy of the method used for calculating the P-V-T data of a mixture is comparable to that with which the theorem of corresponding states has been found to hold for pure hydrocarbons. The author states that the use of the "ethylene" curves for estimating the deviation from the perfect gas law at reduced temperatures may lead but to small error.

According to the author one of the most important factors affecting the accuracy of the calculated results is the pseudo-critical temperature and pressure. Values of these quantities can be estimated for mixtures of low molecular weight with an error of 2 to 3 per cent or less but for the high molecular weight mixtures the error is probably larger. This, he believes, is due to the fact that it is exceedingly difficult to obtain accurate critical data on compounds of high molecular weight. For the present, at least, there seems to be little that can be done except to extrapolate the available data.



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PROBLEMS FROM READERS

Edited by T. F. Smiley

Test Reveals More Oil Is Produced With a Small-Bore Plunger Pump

I have always supposed that the larger the bore of a steel plunger pump, the greater the quantity of oil the operator would get, and I am pretty sure that every oil man in this region holds the same view. I heard the statement made a short time ago that the small-bore plunger will recover more oil, in some cases anyway, than a larger one. I would be glad to know whether this is true or not. My understanding is that a test was made in one of the Oklahoma fields.—E. T. D.

It is true tests have upset the popular belief concerning the efficacy of large-bore steel plunger pumps. Paul Reed, who made an engineering study of this subject, says that up to the time the Oklahoma City field went on the pump it commonly had been assumed that the bigger the bore the more oil you could be certain to pump. In 1928 this assumption was given a jolt by tests carried on in California and though the demonstration was repeated at Seminole shortly before pumping commenced at Oklahoma City, the significance of the findings was not generally appreciated and some of the first wells to go on the pump at Oklahoma City had 2¼-inch bores for steel plunger pumps. Today the only steel plunger bores of this size are to be found on Parker-type pumps where the fluid level is unusually high. Most plunger pumps in the field have bores of 1¼, 1½ and 1¾ inches. Tubing is mostly 2½-inch upset. There is some 2-inch tubing in the field.

An illustration of how the steel plunger pump with a bore of 1¾ inches will pump more oil than one with a large bore is presented by a comparative test made on a lease in the Oklahoma City field. The explanation is found in the longer plunger travel for the smaller pump resulting from the fact that there is less stretch in rods owing to the smaller fluid level in the pump. A 2¾-inch cup pump had succeeded in just raising the fluid to the surface with a negligible output. A 2¾-inch steel plunger pumped 200 bbls. a day. A 1¾-inch steel insert plunger, with a —.002-inch fit, pumped about 600 bbls. a day. If the maximum output had been less than 200 bbls., a 1¼-inch pump of this same make would have been used, because though capacity of the pump would have been lowered by this reduction of bore, the total daily production would have been increased by following the familiar practice of keeping the oil off the sand by pumping a longer time. On a few wells which have been continually overpumped, it has paid to pump very slowly. One example of this is a well which eventually was brought to produce profitably at the rate of 30 bbls. a day with 12 strokes per minute, 48-inch strokes. When pumped hard it made 100 bbls. a day, but in four days it would sand up.

Effect on Well's Output Produced by Variation in the Vacuum Carried

I should like information regarding the effect on production that variations in the amount of vacuum carried on wells cause. The production in the field to which I refer is from the Wall Creek sand in Wyoming. This field has been producing for about 17 years and the present practice is to carry about 10 inches of vacuum on the wells.—D. M. P.

The practice of carrying vacuum on old wells has some advantages, but there are many disadvantages, too, and modern practice in production seems to be trending away from the application of vacuum to producing sands.

You state that you are carrying a 10-inch vacuum on the wells and this is probably measured at the pump. It is therefore not equal to that pressure underground.

The customary method is, as you doubtless know, to apply a vacuum and to connect up an airtight type of casinghead to the suction line and then remove the air from this line and in turn suck on the gas in formation. This has the effect of reducing pressures in the formation. On the other hand, it tends to draw across the face of the sand a current of air that will rob the crude oil of many of its lighter constituents and produce a better quality (wet) gas which of course will yield more gasoline in the casinghead plant. It is doubtful, though, whether it is good practice to increase the yield of gasoline at the expense of the crude, because, as the crude is relieved of its lighter fractions, it becomes thicker and more difficult to move through the sands. In time the viscosity reaches so low a point that much of the oil is left sticking to or covering the sand grains and cannot be produced by any normal production method.

It is suggested that you get a copy of U. S. Bureau of Mines Bulletin No. 148 by J. O. Lewis, published in 1917, on methods of increasing production from oil sands. This book can be obtained by writing to the U. S. Government Printing Office, Washington, D. C., and although it was printed several years ago, it is still a reliable reference work. A later book is Bulletin No. 322 by Ben E. Lindsly and W. B. Berwald, also of the Bureau of Mines, which explains the effect of vacuum on oil wells and which may also be obtained from the Government Printing Office.

Answering your direct question about the effect of vacuum on production, engineers say it would be difficult to measure the effect of vacuum on oil sands, excepting relatively, and while the increased production might justify this method of producing the wells for a time, in the long run it is probable the loss of oil left in the formation would more than offset the gains to be had by applying vacuum.

WHY THEY CALLED IT *Blue-Sky Law*

When a law to protect the investing public from humbug securities was first under consideration in Kansas in 1911 the man who proposed the legislation declared some companies tried to "capitalize the blue skies." So the measure itself was called a blue-sky law, and the name now is applied to any act designed to save the gullible from promotion sharks. Big new oil fields afford a rich opportunity for fleecing the unwary. Prospective victims of get-rich-quick promises read alluring advertisements telling about expected gusher wells, and rush to buy shares in companies formed for the express purpose of selling worthless securities to persons residing far from the field. No company owning a promising oil lease has to peddle stock.

Excessively High Starting Pressures May Damage Wells on Gas-Lift

In the operation of a gas-lift excessive starting pressures are regarded as exerting a harmful effect on the well. Starting pressures have got to be higher than the regular operating pressures, however. At what point does the high starting pressure become injurious? What is the injury it does? How much higher is the starting pressure under ordinary circumstances than the regular pressure?—S. A. F.

It may be set down as a general rule that permitting the starting pressure of a gas-lift well to exceed the rock pressure is distinctly dangerous and certain types of wells may be subjected to serious damage. If mud or paraffin has accumulated in the hole and the direction of pressure differential is reversed, even for a short time, owing to high starting pressure, the walls of the hole are likely to become plastered and the drainage area partly closed. In his work on "Increasing the Recovery of Petroleum," Wentworth H. Osgood says:

"Starting pressures are usually from two to five times higher than normal operating pressures. High starting pressures are due to the greater density of the column of unaerated fluid in the well. This fluid offers greater resistance to flow than the mixed column of gas and oil flowing through the eduction tube during normal operation of the gas lift. Because of the high starting pressures often required, auxiliary compressors capable of furnishing gas at pressures higher than that required for normal operations are usually installed. When gas is being supplied to a number of wells from a central compressor plant, a booster compressor capable of furnishing gas at pressures of 1,000 pounds or more per square inch is installed.

"General statements have been made giving figures, or rather a range of figures, which have represented the starting pressures in some one field or group of wells. These figures are of value for that locality but could hardly be taken as of general occurrence. It is considered to be a simple enough problem to figure the theoretically required starting pressure, once the mean depth to the fluid is ascertained and the depth to the bottom of the tubing or rather the gas inlet, whichever way the well may be flowed. Some extremely high pressures, in one instance 1,400 pounds, have been mentioned as the pressure which was applied in order to start the flow. It might be said, in passing, that the article mentioning the 1,400-pound pressure stated that even this pressure failed to start the flow in this particular case.

"High starting pressure, especially pressures higher than the existing rock pressure, are liable to do irreparable damage to a well. It is believed that as soon as the applied pressure plus the weight of the column of oil standing in the well exceeds the formation pressure, some of the oil will flow back into the sand or formation. Some installations are run with the idea that sudden application of pressure of short duration will not cause the oil to return to the sand in appreciable amounts, but when the incompressibility of the oil column, no gas present, is considered, it would appear that if any mud, wax, or other foreign matter is present in the well bottom, it will be forced into the hole's surface sand pores. When normal flow is again established, the wells do not regain their original condition and must be cleaned, causing a delay and loss of production. Different methods and appliances have been developed and used for starting the flow with comparatively low applied pressures."

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THE MARK OF THE CHAMPION SPRINTER . . .

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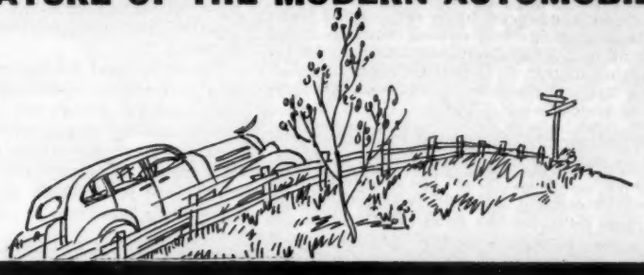

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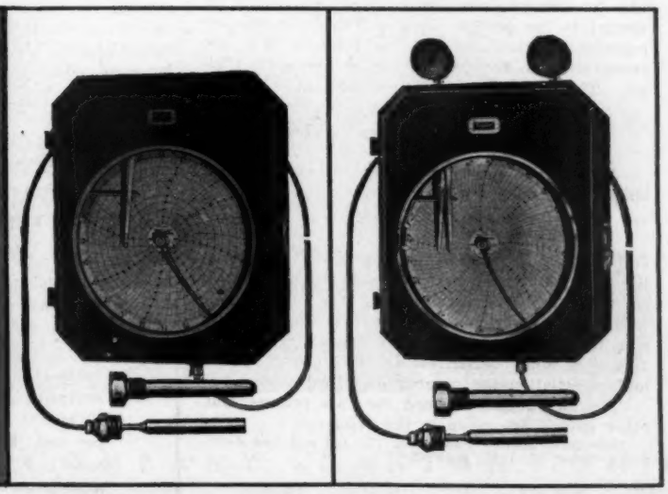

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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Process for Refining Gasoline That Requires No Sulfur

It has come to my attention that a new process has been announced by a responsible company, whereby sulfur will not be required in the refining of oil. I have not been able to locate a description of this so it will be appreciated, if you have the information, if you will give me something about it.—E. T. M.

A method for the sweetening of refinery and natural gasoline has been described by Walter A. Schulze and A. E. Buell, which has been designated the Perco Process, in The Oil and Gas Journal. The extracts following are from this article.

The early theories regarding the reaction of copper salts and mercaptans suggested that one-half of the mercaptans were converted into disulfides and the other to oil soluble cuprous mercaptides. However, it was found that certain copper solutions caused a complete conversion to disulfides; it was this fact that led to the development of the Perco Process.

The mechanism of the reaction of mercaptans with copper sweetening solution is essentially the oxidation of the mercaptans to the corresponding disulfides and the reduction of the cupric ion to the cuprous state. Exemplified with a cupric chloride solution, the reactions are as follows:

(1) 4 R-S-H + 2 $CuCl_2$ → R-S-S-R + 2 R-S-Cu + 4 HCl
Mercaptan; Cupric chloride; Disulfide; Cuprous mercaptide; Hydrochloric acid

(2) 2 R-S-Cu + 2 $CuCl_2$ → R-S-S-R + 4 CuCl
Cuprous mercaptide; Cupric chloride; Disulfide; Cuprous chloride

Combining the two stages, the equation becomes:

(3) 4 R-S-H + 4 $CuCl_2$ → 2R-S-S-R + 4 CuCl + 4 HCl
Mercaptan; Cupric chloride; Disulfide; Cuprous chloride; Hydrochloric acid

Cuprous chloride formed in the reaction, although practically insoluble in water, is quite soluble in solutions containing a high concentration of chloride salts. The hydrochloric acid is retained also by solution. These two factors are highly essential to the process since in the next step the cuprous chloride and the hydrochloric acid are reconverted to cupric chloride by oxidation with air. The equation for this reaction is:

(4) 4 CuCl + 4 HCl + O_2 → 4 $CuCl_2$ + 2 H_2O
Cuprous chloride; Hydrochloric acid; Oxygen; Cupric chloride; Water

Addition of equations (3) and (4) gives the simple expression

(5) 4 R-S-H + O_2 → 2 R-S-S-R + 2 H_2O
Mercaptan; Oxygen; Disulfide; Water

from which it is seen that no chemicals, other than oxygen which in practice is obtained from compressed air, are used up in the process.

In the study of the various copper solutions it was found that only those solutions containing relatively high concentrations of chloride or bromide reacted in the manner described above.

The advantages claimed for this process and other details are given in the reference.

Reference: Schulze and Buell, The Oil and Gas Journal, October 17, 1935, page 42.

Cost for Odorizing Gases That Have Little or No Odor

What is considered to be a reasonable approximate cost for odorizing natural gas or mixtures of gas that have little or no odor?—N.C.E.

There are a number of substances adapted for use, as a warning agent or the detection of leaks, in gases that do not have a pronounced odor. Some of these are quite expensive so cannot be used in systems handling large quantities of gas. A petroleum product, first prepared in California and named calodorant, has been extensively used for this purpose; its properties and use have been described in the literature. The only detailed cost figures are those relating to the use of this material.

Hamilton and Rutherford have given information covering the development of calodorant and its properties. Hough and Corfield have described the equipment required with cost data, and Kollock has given the details of the actual operation of a station in Atlanta, Ga. The summary of costs given here is based on the information supplied from these references.

ODORIZING GAS COSTS, ATLANTA STATION

	Per 1,000 cu. ft.
Odorant oil	$0.00087
Supervision and repairs	.00010
Interest and depreciation @ 15%	.00013
Total	$0.00110

The station, with about 3,000 gallons storage capacity, cost close to $850. A small station, 200 gallons storage, should cost about $400.

The required quantity of this odorant varies from 2.2 gallons per million cubic feet at high pressure, above 400 pounds, to 12.4 gallons for low pressures of about 50 pounds.

References: Hamilton and Rutherford, The Oil and Gas Journal, June 4, 1931, T. 125. Hough and Corfield, Western Gas, February, 1930, page 23. Kollock, Gas Age-Record, March 28, 1931, page 454.

Spalling of Poor Quality Brick

What is the meaning of non-spalling when used in connection with the tile and brick used for building a furnace?—Y. S. F.

The essential material in clay used for making fire brick and tile is silica, which has a tendency to expand under heat. This property is controlled by proper adjustment of the other compounds. Repeated changes of temperature causes faulty brick and tile to chip and disintegrate. This effect is known as spalling. A non-spalling brick is one that withstands high temperatures. Spall is a mining term, meaning to chip or break up by hand.

SPECIFICATIONS

U. S. ARMY AIRCRAFT ENGINE FUEL—GRADE 65

Water and suspended matter	nil
Octane number, min.	65
Corrosion and gum, copper dish, no gray or black. Increase min. 3 mgm.	
Sulfur	0.10%
Distillation: Evaporated, min., 10 per cent at 158° F., 50 at 230, 90 at 320. Residue, max., 2 per cent. Minimum sum of the temperatures in F.° of the 10 and 50% evaporated points shall not be less than 307° F.	
Vapor pressure, max.	7 lbs. at 100° F.
Freezing point	—76° F.
Water tolerance	±2 ml.

Source—A petroleum product. Aromatic hydrocarbons may be added.

Use. Training type aircraft engines.

Reference: U. S. Air Corps No. 3559-D, April 15, 1935. Material Division, Wright Field, Dayton, Ohio.

Polymerization of Gas Paraffins to Liquid Hydrocarbons

I am desirous of learning what has been accomplished toward the conversion of the gaseous paraffin hydrocarbons into liquids having a high octane value. The articles I have seen related to unsaturated bodies, mixtures containing unsaturated compounds and possibly aromatics obtained from refinery gases. Can we look to natural gas as a source of high antiknock motor fuel?—M. W. A.

A great deal of attention is now devoted to the problem of converting the lower paraffin hydrocarbons to liquids of high octane value that may be suitable for use as motor fuel, many patents have been applied for and numerous articles on the subject are appearing in the journals. Some idea of the nature of the problem may be obtained from the report of the investigations by Sullivan, Ruthruff and Kuentzel.

The experiments were conducted in two phases. The olefins were produced by cracking the gaseous paraffins at atmospheric pressure and then were polymerized at pressures, 500-3,000 pounds, with temperatures ranging from 700 to 850° F.

The highest yield of olefins, 39 per cent, from ethane resulted from high temperatures and short period contacts. Increase in time of contact beyond a certain point permitted secondary reactions which destroyed olefins. Results were similar when propane was pyrolyzed. When 50 per cent conversion of propane was reached, the volume increase was theoretically 50 per cent but actually 55. For 75 per cent conversion the volume increase was, not 75, but 91; etc.

Two three-stage compressors compressed the olefins preparatory to polymerizing them and they were kept in a high-pressure storage system from which they entered the polymerizing bomb.

To prepare olefins, ethyl alcohol or isopropyl ether was dehydrated by passing over coke saturated with phosphoric acid, at 550° F. The olefins prepared in this way were 95 per cent pure. The bomb was heated to operating temperature as rapidly as possible, while some of the charge flowed through it. Liquid was removed from the exit gas stream, after the process was in operation, by aid of high- and low-pressure condensers.

The ethylene converted to liquid at constant temperature increased with time of contact, reaching a maximum of 59 weight per cent at 850° F. and eight minutes contact, with a pressure of 500 pounds. Ethylene polymers produced at this pressure were of 52-54° A.P.I. gravity and contained 75-80 per cent of gasoline having an octane rating of 74-78 R.M. Liquid conversions were not so great from propylene as from ethylene. However, the propylene polymers had gravities of 52-54 A.P.I. and contained 75-82 volume per cent of gasoline, octane rating 78 to 80.

From ethylene the maximum yield, under 1,000 pounds pressure, of 70 per cent of liquid came from a contact time of 27 minutes at 850° F. The yield of polymers from propylene was only 47 per cent. When the pressure was raised to 2,000 and 3,000 pounds, weight per cent conversion increased very fast for 10 to 20 minutes and then increased more slowly or diminished under some conditions with the temperature at 800° or 850° F.

In general, from 60 to 65 per cent of the propylene could be polymerized to liquid and from 70 to 80 per cent of the ethylene.

Natural gas may furnish a large part of the motor fuel of the future, provided the cost of conversion is not too high.

Reference: Sullivan, Ruthruff, and Kuentzel, Ind. Eng. Chem. 27, 1072, 1935. See also Ipatieff, Ind. Eng. Chem., 27, 1067, 1935; Egloff, The Oil and Gas Journal, March, 1936, page 140.

TIMKEN TUBES

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If the necessary properties are not in the steel to start with, no amount of skill and care in rolling and piercing can put dependability and long life into the tubes.

Timken refinery tube steels are not confined to so-called standard analyses, but include special steels created in the Timken metallurgical laboratories to meet specific conditions.

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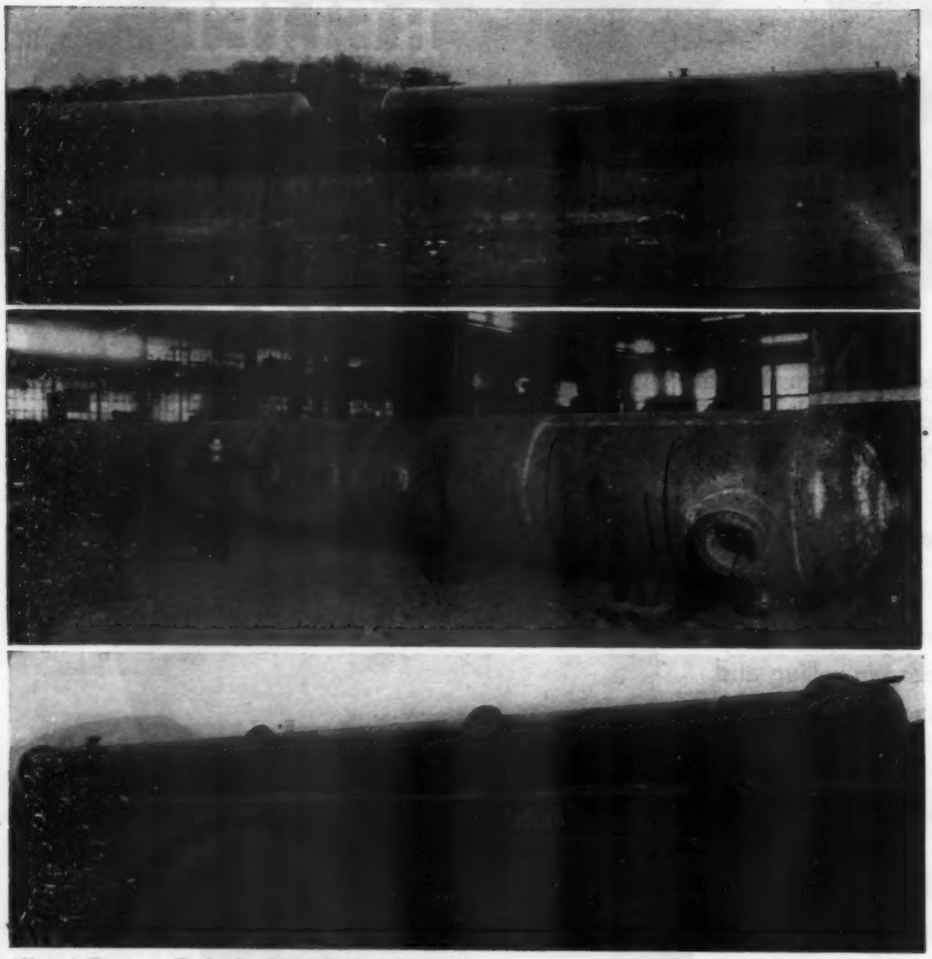

(Upper) Extractor Tanks for Magnolia Petroleum Company. *(Center)* Fractionator Column for Continental Construction Company. *(Lower)* Rectifier Tower for Standard Oil Company of Indiana.

CE Towers and Drums for any oil refinery equipment requirement can be furnished welded or riveted, as desired. Vessels may be any dimensions up to shipping clearance limits. Equipment fabricated to order.

CE pressure vessels and fabricated plate work are built by an organization that has had more than fifty years of experience in this work. Facilities include boiler shops, pattern shops, foundry, machine shops; plate-bending press capable of bending plates cold up to 4 inches thick; perfected fusion welding technique; Class 1 welders; furnace for stress relieving; 400,000-volt X-ray machine; chemical and physical laboratory.

These facilities qualify Combustion Engineering to build refinery vessels of any type, and in any size that can be shipped. The large amount of work done for leading refineries, as evidenced by the accompanying photographs, is indicative of the satisfactory service that can be expected from equipment fabricated in CE shops.

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CE PRODUCTS: Pressure Vessels, Fabricated Plate Work, All types of Boilers, Mechanical Stokers and Pulverized Fuel Systems. Complete Steam Generating Units, Water Cooled Furnaces and Heat Recovery Equipment.

Research Activities of Mellon Institute During 1935-36

Twenty-five years ago the industrial fellowship system of Robert Kennedy Duncan, the investigational procedure of Mellon Institute, was established at the University of Pittsburgh by Andrew W. Mellon and Richard B. Mellon. The first industrial fellowship had begun work at the University of Kansas in 1907. In 1913 the Kansas and Pittsburgh units were combined in Mellon Institute of Industrial Research, founded and later placed on a permanent basis by the Mellon brothers.

The period covered by this report, 1935, is characterised by the number and variety of new products of commercial promise that have come from fellowship investigations. Among these novel creations are an opal glass, two marble products, a group of refractories, several series of organic compounds, a synthetic resin, a safety glass, a specialty paper, an alloy steel for safety-razor blades, and several waterproofing agents for open fabrics.

Because of the importance of air conditioning in manufacturing plants as well as in hotels, restaurants, theatres, and private residences, the multiple fellowship of the Philip Carey Co., whose incumbents are R. H. Heilman and R. W. Ortmiller, has been conducting a thorough investigation of various insulating materials used in the low-temperature field. Most of the published data on conductivities of low-temperature materials relate to but one temperature; and as the conductivity of many low-temperature insulations varies considerably with temperature, it is essential that the conductivity be determined over the range of temperatures to which the material is to be applied. The results of this research indicate that the conductivity of some low-temperature insulations is increased by more than 50 per cent for an increase in temperature of only 100° F. This fact is of high value to the industries and also to home owners who are contemplating residential insulating.

The fellowship has also carried on studies in the high-temperature field. In this domain the designing engineer has generally used an emissivity value of 0.80-0.95 for refractory materials, with no regard to the color of the refractory. Within the last two years, however, the fellowship has found the emissivities of refractories of a number of different colors and has concluded that, contrary to general belief, the emissivity of light-colored refractories decreases rapidly with increase in temperature, the decrease starting at a temperature of about 400° F. These results will be of interest to metallurgists and of particular concern to electric furnace operators, to whom cost of energy is an important factor.

The fellowship of the Pittsburgh Steel Co., which was established in 1927 for research on steel and wire products, has been carrying on several diversified and broad investigations. Papers have been developed for use on paper-backed building fabrics; bright annealing processes for wire have been perfected, including a coating for protection against rust; several wire-drawing lubricants have been developed, and the effect of cold drawing on various physical properties of wire has been studied.

In addition to this basic work, the fellow, S. A. Braley, has been largely responsible for the installation of a specification department, whose function is to define all details of processing procedure for each and every wire requirement of the customer. This procedure makes the scientific data obtained from fundamental researches easily applicable to production and provides the donor's customers with the advantage of scientific control and scientific uniformity so necessary for their needs. For manufacturers' wire, properties such as tensile strength, hardness, elongation, bend test, and finish are of extreme importance. Definite relationships among these factors and the composition of the steel and the nature of cold work have been found that enable accurate prediction of ultimate results. The proper finishes for various fabricating operations have also been carefully studied and means have been introduced for producing finishes that have led to better fabricating products, with less wear on the manufacturing equipment.

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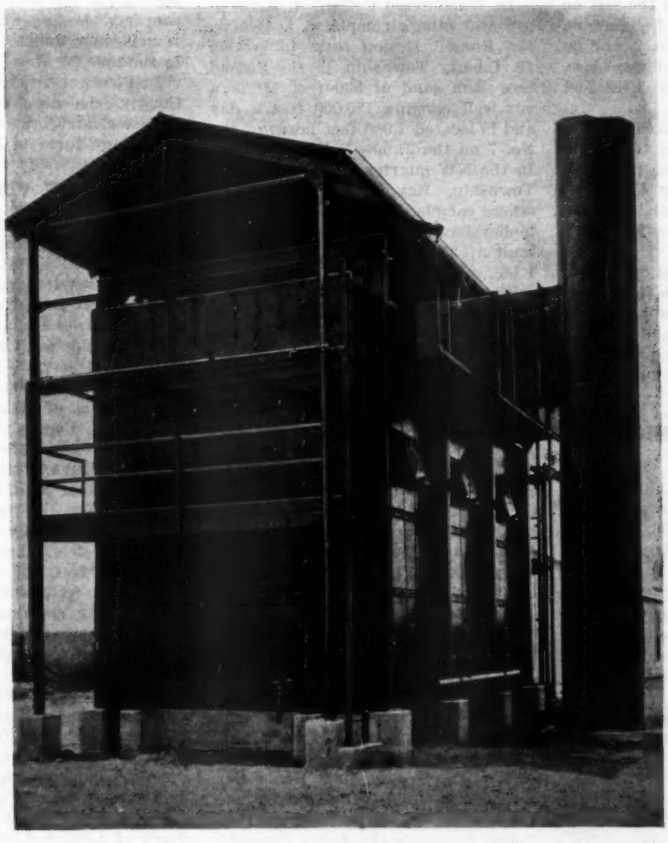

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Eastern Field Report

By STAFF CORRESPONDENT

KANAWHA COUNTY DEEP TEST WELL IS FIVE MILE EXTENSION

PITTSBURGH, Pa., Apr. 22.—A very important deep test was completed during the week in West Virginia, which resulted in a good gas well. In Poca district, Kanawha County, W. O. Zeibold and others completed the test on the D. A. Griffith farm in the Oriskany sand and it is showing for 3,345,000 feet a day, natural. This extends the gas possibilities of the Milliken anticline north for about 5 miles.

This test is located about 5 miles north, 15 degrees west of the Columbian Carbon Co. No. 1 on the G. and D. Copenhaver farm in Elk district, Kanawha County, and is on Boardtree Run, a tributary of Grapevine Creek, and is also about 5½ miles east of Sissonville. In this well the top of the Corniferous lime was at 4,751 feet, with the top of the Oriskany sand at 4,857 feet and the gas at 4,869 feet. It is found on the Kenna Quadrangle. The elevation of the mouth of the well is about 750 feet, which places the top of the Oriskany sand slightly higher subsea than those in Elk district.

Four additional locations for deep tests were made in Kanawha County. In Elk district Godfrey L. Cabot, Inc., has made a location for a test on the Robert L. Bibby farm of 126½ acres and about 2,000 feet east, 30 degrees south of the Benedum Trees test on the Mary C. Wingfield farm. The elevation of the mouth of the well is 1,024.77 feet. In Malden district this operator has made a location for a second test on the Pius R. Levi farm on Georges Creek 2,384 feet south, 13 degrees west of the Nellie Tompkins test. To the extreme south of the proven area this operator has made locations for two additional deep tests on the William B. Tompkins farm. The No. 8, or second deep test on the farm, is located 1,806.2 feet south, 42 degrees east of the No. 1, with an elevation of 1,131.8 feet, and the No. 9 is 2,419.7 feet north, 35 degrees east of the No. 1 and has an elevation of 1,179.03 feet. The first deep test on this farm was good for over 5,000,000 feet a day.

In Elk district, Kanawha County, two additional wells should be completed shortly. The Columbian Carbon Co. is down 5,044 feet in the No. 3 on the G. and D. Copenhaver farm and 4,910 feet deepening the No. 1 on the W. L. Burdette farm. On the M. M. Robertson farm, west of Coopers Creek, this company is drilling at 4,902 feet, and on the W. H. Baxter heirs farm at 4,690 feet. On the Elkland Improvement Co. lease this company is down 2,730 feet. On the island at the mouth of Coopers Creek V. C. Smith and others have reached 5,453 feet. Benedum and Trees are down 527 feet in the second test on the Mary C. Wingfield farm. The Yaok Oil & Gas Co. is drilling at 840 feet on the Goshorn heirs farm second test.

In Malden district the South Penn Oil Co. is about ready to penetrate the Oriskany sand in the second test on the Katherine C. Scott farm, drilling at 4,820 feet after setting the casing in the Corniferous lime and cementing it in. Godfrey L. Cabot, Inc., is drilling at 3,875 feet in the test on the W. D. Lewis farm, 487 feet on the Nellie B. Tompkins No. 2, and on the Campbells Creek Coal Co. lease, 2,200 feet in the No. 9 and 1,121 feet in the No. 10.

In Loudin district, Kanawha County, the United Carbon Co. is drilling at 4,480 feet in the test on the C. C. Dickinson farm. Godfrey L. Cabot, Inc., has reached a depth of 1,550 feet in the No. 2 on the Kanawha Land Co. lease.

There were 22 operations completed in the lower eastern fields during the week, which resulted in 3 dry holes, 12 gas wells and 7 small producers with an initial production of 17 bbls. Most of the production was in Southeast Ohio.

SOUTHEAST OHIO

In Athens County the Ohio Fuel Co. drilled a test, No. 6,110, on the Sunday Creek Coal Co. lease in the SW quarter of section 36, Trimble Township. It is located 800 feet east of the No. 6,061 and was a dry hole in the Berea san at 1,190 feet.

In Hocking County the Murray City Oil & Gas Co. completed No. 11 on the N. M. Acker heirs farm in the SE quarter of section 6, Ward Township, in the Clinton sand at a depth of 3,593 feet. It has a showing of about 3 bbls. a day, natural.

In Licking County P. T. Armstrong and others completed No. 16 on the J. W. L. Motherpaw farm, Lot 12, Franklin Township, in the Berea sand at 672 feet. It will make a 2-bbl. pumper. In section 6, Perry Township, Armbuster and Sticker completed a test on the G. E. Patton farm in the Berea sand at 694 feet and it is showing for 1 bbl. a day and has a volume of about 50,000 feet of gas.

In Monroe County Charles W. Lynch completed a test on the Oliver West farm in section 29, Perry Township, at a total depth of 2,023 feet. It is producing 3 bbls. a day from both the Injun sand and the Berea grit.

In Pike County, the Dove Oil & Gas Co. completed a test on the D. D. McGuire farm near Dove, Union Township No. 4, Range No. 21, in the Ohio shale at 375 feet. It is a gas well good for 50,000 feet a day.

In Perry County the Gas Producing Co. of Ohio completed a test on the D. J. Lones farm in the SE quarter of Section 36, Thorn Township, in the Clinton sand at a total depth of 2,860 feet. It is a gas well gauging 1,500,000 feet and there was no showing of any oil.

In Vinton County the Co-Operative Oil Co. completed No. 4 on its own property near Bollins Mills in section 3, Knox Township, in the Berea grit at a depth of 1,130 feet. It produced 4 bbls. the first day after shot.

In Washington County A. S. Stewart and others completed a test on the Russell Heslop farm in section 19, Liberty Township, in the Second Cow Run sand at 930 feet. It is a gas well gauging 130,000 feet a day and is located 1,000 feet north of the No. 7 on the James R. Heslop farm. In the NW quarter of Lot 46, Salem Township, Bay and Weppler and others completed No. 8 on the Christopher Lauer farm in the Buell Run sand at 376 feet and it is good for 1 bbl. a day.

SOUTHWEST PENNSYLVANIA

One small producer was completed in Southwest Pennsylvania during the week. In Morris Township, Greene County, the Penn Ohio Oil Co. completed the test on the Frank Toland farm in the Gordon sand and it is showing for 3 bbls. a day.

In this township the Duquesne Gas Co. is drilling at 900 feet on the J. M. Clutter farm. Burleigh Wright is drilling at 2,150 feet on the D. C. Yoders farm. The Injun sand was at 1,630-1,884 feet.

In Richhill Township, Greene County, Lewis & Co. are down 1,867 feet in the test on the Samuel Chess farm. The Natural Gas Co. of West Virginia is rigging up to deepen the test on the Sherman Braddock farm. The present depth is 2,774 feet.

In Franklin Township, Greene County, the Waynesburg Home Gas Co. is down 2,050 feet deepening the No. 1 on the W. P. Guthrie farm. In Center Township the South Penn Oil Co. is drilling at 926 feet on the Charles Harvey farm. In Perry Township the Carnegie Natural Gas Co. is down 3,206 feet deepening the No. 1 on the Lee Wade farm. The Fourth sand was at 3,104-3,115 feet.

In Amwell Township, Washington County, the Union Gasoline & Oil Corp. is down 2,750 feet in the test on the Thomas Beabout farm and have spudded in and started drilling the test on the Hiram Vankirk farm. The South Penn Oil Co. is drilling at 535 feet on the Anna A. Lowery farm and has the rig completed on the J. Q. Zimmerman farm and the material for a test on the Hazel M. Seese farm. In Morris Township the New Oil & Gas Co. is drilling at 850 feet on the D. L. McVay farm.

In South Strabane Township Victor D. Behm and others are down 2,150 feet in the test on the William Paul and Sons farm. In Peters Township Amon and Kaufman are drilling at 2,160 feet on the Parks and Son farm. G. N. Glass has reached a depth of 2,400 feet on the F. W. McEwan farm.

Deep Tests

On Chestnut Ridge in South Union Township, Fayette County, William Snee and others are drilling at 6,270 feet in the test on the Summit Hotel property. Casing was run and progress is slow due to the line rubbing in the hole.

In Pleasant Township, Washington County, the deep test of Norwood Johnston and others on the James McBurney farm is drilling at 2,016 feet.

WEST VIRGINIA

No producers were completed in West Virginia during the week. One, however, had a fair oil show. In Sherman district, Calhoun County, F. F. McIntosh drilled deeper the No. 1 on the Charles Poling farm from the Maxon sand at 1,925 feet to the Berea sand at 2,666 feet. It is a gas well gauging 1,500,000 feet along with 10 bbls. of oil a day.

In Cabell County A. O. Sears completed the test on the Lucy A. Woods farm in Guyandotte district at a total depth of 2,870 feet as a small gas well. The Big lime was at 1,170-1,305 feet, the Big Injun sand at 1,327-1,421 feet, the Berea sand at 1,973-1,985 feet, the Brown shale at 2,028-2,854 feet, with about 68,000 feet of gas showing at 2,584-2,850 feet. In this district the Merritts Creek Gas Co. completed the test on the David Gideon farm at a depth of 2,910 feet. It is also a small gas well from the Brown shale, which extended from 2,453-2,900 feet.

In Gilmer County the McCall Drilling Co. completed the test on the E. J. James farm in Center district as a gas well in the Injun sand at a depth of 1,665 feet. It gauges 2,000,000 feet a day.

In Lincoln County W. C. Kingery and others completed a test on the M. F. Brown farm in Sheridan district at a total depth of 3,116 feet. It is a small gas well. The Big lime was at 1,147-1,325 feet, the Big Injun sand at 1,389-1,440 feet, the Berea sand at 1,922-1,938 feet, with gas at 1,923-1,926 feet; the Brown shale was at 2,580-3,111 feet, with gas showing at 3,106 feet. The volume is about 50,000 feet.

In Ritchie County Mosser and Collins drilled a test on the Edith Martin farm in Murphy district through the Big Injun sand at a depth of 2,090 feet. It was a dry hole. In this district Shannon Dawson completed a test on the Spencer Wilson farm in the Injun sand at a depth of 2,103 feet. It is a gas well gauging 828,000 feet a day. Again in Murphy district the Southern Oil Co. drilled deeper

(Continued on Page 54)

California Field Report

TEST ON MCDONALD ISLAND SHOWS GAS, HOPING FOR OIL

By
L. P. STOCKMAN

LOS ANGELES, Calif., Apr. 27.—Standard Oil Co. focused attention of operators on McDonald Island in the San Joaquin River slough about 10 miles outside of Stockton in San Joaquin County a few days ago when its initial wildcat showed evidence of a possible accumulation of dry gas. On a drill stem test the well showed approximately 3,000,000 feet of gas. No actual gauge was taken and drilling operations were resumed as the company is desirous of ascertaining the possibility of developing commercial production of crude oil. McDonald Island is about 20 miles north of the Tracy gas field, discovered by Amerada Petroleum Corp. a little over a year ago.

Shell Oil Co. has logged 55 feet of oil sand in No. 1 K.C.L., a wildcat in the Stevens area, Kern County, about 8 miles south of Rio Bravo. The sand logged at 7,892 feet has prompted Ohio Oil Co. to cancel its abandonment notice on a test approximately 4 miles north. Shell's test is in section 29-30-26, and Ohio's wildcat in the Rio Bravo area, scheduled for abandonment at 5,758 feet, is in section 1-30-25. In Monterey County, Shell Oil Co. has passed 8,100 feet in No. 1 Branch, a wildcat in section 34-24-10, which showed some favorable indications at 7,900 feet. In Fresno County, Seaboard Oil Corp. No. 1 Welsh in section 10-16-13 is at 3,451 feet, while Western Gulf Oil Co. is drilling its third test in the Cantua area at 1,500 feet. Western Gulf has extensive holdings north of Coalinga.

Santa Maria

Completion of Union Oil Co. No. 1 Adam in the Santa Maria Valley has greatly stimulated interest. Union is starting a new well. In the Sudden district of Santa Barbara County, approximately midway between Point Arguello and Point Concepcion, Union is abandoning its wildcat in section 10-5-35.

Three wells were put on production in the Elwood field, Santa Barbara County, although only one was a new well. This was Signal Oil Co. No. 7 on tideland permit No. 98, doing 680 bbls. of 34.9 gravity on a compressor. It was bottomed at 3,757 feet and finished with a 5¾-inch liner including 81 feet of perforated. The company circulated 600,000 feet of gas and recovered a net of 175,000 feet in addition to the amount circulated. Pacific Western Oil Co. No. 4 on tideland permit No. 92 was returned to production flowing 610 bbls. of 35.1 gravity and 1,630,000 feet of gas per day after being redrilled and deepened to 3,735 feet. Barnsdall and Rio Grande No. 9-B on tideland permit No. 88 was recompleted flowing 1,175 bbls. of 37.8 gravity and 495,000 feet of gas per day after redrilled and deepened to 2,725 feet and finished with a 4¾-inch liner including 222 feet of 100-mesh screen.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Apr. 12		Apr. 5			
Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	.....	.....	115,860	16,551	1,650,119	1,703,346
Kerosene	79,040	11,291	.....	.....	464,996	468,421
Foreign exports—						
Crude oil	244,474	34,925	327,068	46,724	2,717,882	3,198,034
Fuel oil	84,317	12,045	181,431	25,919	2,719,611	3,562,577
Diesel and gas oil	21,511	3,073	101,123	14,446	1,265,286	1,037,174
Gasoline	102,623	14,660	50,601	7,229	1,635,179	1,488,900
Kerosene	.....	.....	30,234	4,319	166,314	231,731
Other unfinished oil	.....	.....	.....	.....	6,439	45,712
Coastwise-domestic—						
Crude oil	65,212	9,316	186,648	26,664	1,758,806	1,424,652
Fuel oil	114,117	16,302	89,740	12,820	2,580,305	2,353,202
Diesel and gas oil	11,930	1,704	20,370	2,910	441,666	211,867
Gasoline	295,378	42,197	227,401	32,486	3,816,424	1,999,776
Kerosene	8,684	1,241	.....	.....	79,586	34,598

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	.....	157,258
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	.....	.....	.....	.....	.....	71,325
Lubricants	.....	.....	.....	.....	7,608	12,381
Foreign exports—						
Crude oil	.....	.....	.....	.....	628,909	550,129
Fuel oil	30,565	4,366	19,176	2,739	1,109,781	442,025
Diesel and gas oil	.....	.....	.....	.....	144,693	342,812
Gasoline	249,101	35,587	.....	.....	966,293	780,368
Kerosene	.....	.....	.....	.....	163,707	213,898
Lubricants	.....	.....	.....	.....	73,788	50,569
Coastwise-domestic—						
Fuel oil	34,160	4,880	184,172	26,310	2,130,314	1,440,241
Diesel and gas oil	18,631	2,662	.....	.....	179,703	79,662
Gasoline	182,071	26,010	65,086	9,298	1,380,229	1,134,030
Kerosene	11,080	1,583	.....	.....	55,772	10,149

Torrance-Redondo

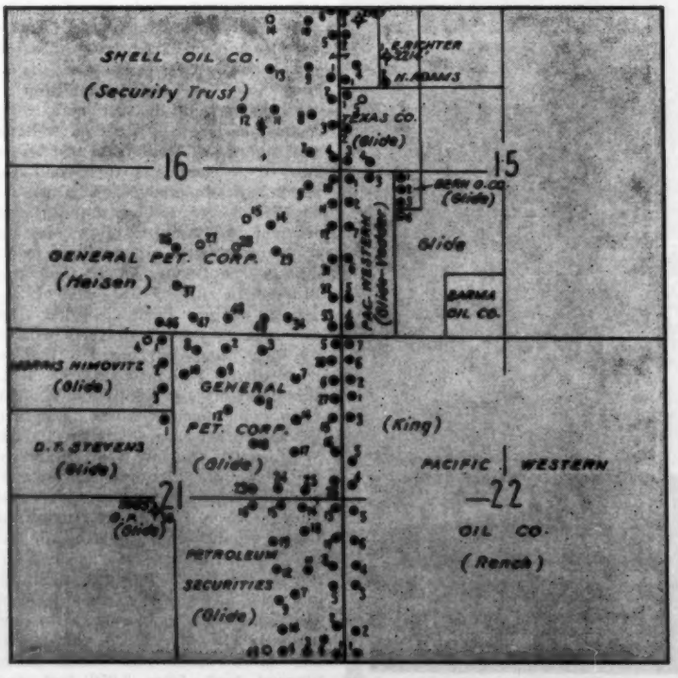
The Redondo section of the Torrance field is rapidly assuming the appearance of a new oil field due to the large number of new derricks erected or under construction. The extreme western end is in proximity to tidewater and consists of gentle sloping hills with an elevation not to exceed 200 feet. These hills are like sand dunes and operators have not experienced any unusual difficulties. Subsurface formations are conducive to rapid footage and these 3,500-foot wells can be drilled at a cost not to exceed $50,000 each. Only two strings of casing are used. Interest was stimulated by completion of Rennek Oil & Gas Corp. No. 1 Redondo, pumping 240 bbls. of 16.2 gravity per day from 3,448 feet. Immediately the company hauled in rig material for a second well 260 feet south of center line of the Pacific Electric Railway right-of-way and 50 feet west of the east line, city of Redondo.

Approximately 20 derricks have been erected and locations staked for 10 more. New wells are being started by R. A. Brown, W. C. Roach, Dumas-Brown Oil Co., Dumas-Lewis Oil Co., Langstaff Petroleum Corp., Lawler Petroleum Co., Linderman Oil Corp., McVan Oil Co., National Pacific Oil Co., Redondo Oil Corp., Regent Oil Co., Sioux Oil Co. and the White Five Oil Co. Tu-Jax Oil Co. and the Walken Oil Co. have spudded their tests. Chanslor Canfield Midway Oil Co. No. 23 Del Amo, a deep test in the older section, is below 4,800 feet.

Kern River

The West Front section of the Kern River field yielded three wells and another potential producer is nearing completion. Republic Petroleum Co. completed its initial test on the recently acquired Fleishacker in section 11-28-27 pumping 241 bbls. of 14.2 gravity per day from 1,981 feet. This proves additional acreage as No. 1 Fleishacker is approximately 2 miles northwest of the company's Strassburger lease, upon which the company completed eight commercial producers during the past year. Republic Petroleum has erected a new rig on the Strassburger lease and has ordered rig material for No. 2 Fleishacker. General Petroleum Corp. No. 5 Young was brought in pumping 120 bbls. of 14.2 gravity per day from 2,130 feet after being plugged back from 2,157 feet. Chanslor Canfield Midway Oil Co. No. 59 in section 23-28-27 registered an initial daily production of 122 bbls. of 15.4 gravity from 2,184 feet after being finished with an 8⅝-inch liner including 253 feet of perforated. Kern River Oilfields Co. has concluded drilling on No. 1-B in section 25-28-27 at 2,045 feet and pumping equipment is being rigged up.

Western Gulf Oil Co., discoverer of the Fruitvale field of Kern County, completed No. 21-B on the Kern County Land Co. lease in section 22-29-27 and should have No. 2 Red Ribbon in section 27-29-27 tanking oil within a few days. No. 21-B was brought in flowing 338 bbls. of 21.6 gravity per day from 3,875 feet after being finished with a 6⅝-inch liner including 291 feet of perforated. The company is rigging up rotary drilling equipment for No. 3 Red Ribbon. Mohawk Oil Co. has about completed reaming in No. 1 Osborn and should land the water string shortly. T. E. Connelly, a new operator in the Fruit-



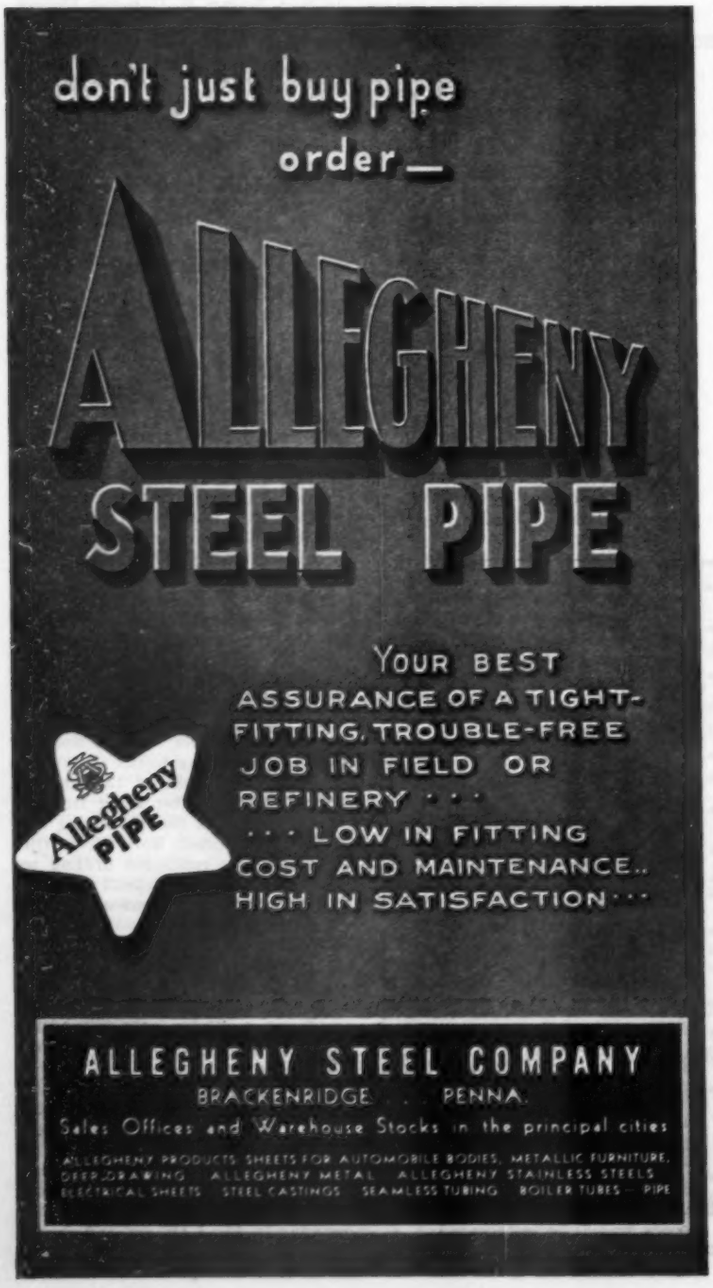
Mount Poso production reflects accumulation along a fault also responsible for production at Round Mountain, California

vale field, is rigging rotary drilling equipment for No. 1 Borton in section 21-29-27. Ohio Oil Co. is expected to complete a well in the Buena Vista Lake gas field within 48 hours as No. 6-A Kern County Land Co. property, in section 32-31-26, is being prepared for immediate test. A formation test conducted with the packer set at 4,576 feet and the valve open for 10 minutes resulted in a flow of gas estimated at 5,000,000 feet through a three-eighths inch bean. Immediately upon completion of No. 6-A Ohio will spud in No. 7-A in section 5-32-26. Drilling in the Buena Vista Lake gas field has indicated a commercial accumulation of dry gas, but there has been a marked lack of uniformity in the initial daily production of wells. Ohio has drilled several dusters and has defined the field in two directions. Approximately 600 acres have been proved productive and several hundred additional acres may ultimately be found.

Midway-Sunset

The Midway-Sunset field of Kern County, dormant for several years during overproduction in Los Angeles Basin, has shown a consistent increase in drilling operations for several months and will probably continue active the remainder of the year. Recent drilling in the Lake View section and in the Gibson area around section 6-11-23, has resulted in completion of several excellent wells. General Petroleum has picked up an exceptionally well saturated oil sand in No. 1 Main Line in section 6-11-23. It tested wet and the company recemented the 8⅝-inch water string at 2,668 feet. Gibson Oil Co., which focused attention on this section a few months ago, should have No. 2 O'Brien ready for an early production test provided a satisfactory water shutoff is effected on the 8⅝-inch, to be run in and cemented within 10 days. This company took over No. 3 Hart & Dearin, bottomed at 2,392 feet and preparations are under way to deepen it.

Two wells were added in the Midway-Sunset field. Alford Oil Co. No. 4 Freed in section 25-12-24, was brought in pumping 328 bbls. of 23.1 gravity per day from 2,833 feet after the hole had been finished with a 6⅝-inch liner carrying perforations at 2,592-2,815 feet. The crew was moved to the Equitable property in section 4-32-23 to spud in this well, which appears assured of production. Hugh B. Evans completed No. 12 in section 35-32-23, but relatively small production was secured. It was carried to 2,305 feet and plugged back to 1,890 feet and brought in on the beam pumping 56 bbls. of 15.8 gravity per day. Berry Holding Co. has staked location for No. 23 Hillside, in section 34-12-24.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Round Mountain

Honolulu Oil Corp. got a gas well upon completion of No. 88 in section 18-28-29 in the Round Mountain field of Kern County. It was shut in immediately. It blew in while the crew was making a water shutoff test on the 8⅝-inch water string landed and cemented at 1,820 feet and flowed for a short time at the rate of 10,000,000 feet of gas per day, accompanied by a small flow of crude. Two additional potential producers are nearing completion and another, Honolulu No. 77 in section 18-28-29, should be tanking oil shortly. Wells nearing completion include Shell Oil Co. No. 5 Caldwell in section 7-28-29 and Round Mountain Oil Co. No. 2 Jewett in section 19-28-29.

Standard Oil Co. is making up time in the Kettleman North Dome field having completed four wells and recompleted another after redrilling and deepening within the fortnight. Standard's latest completion was No. 61-33-J, third producer in less than 10 days. It was brought in flowing 1,045 bbls. of 38.4 gravity per day along with 760,000 feet of gas from 8,090 feet, although it was evident it would easily make 3,500 bbls. daily if desired as it flowed for a short period at the rate of 4,000 bbls. per day. This well was finished with 479 feet of flush joint casing as a liner perforated with round holes at 7,760 feet. Standard recompleted No. 21-19-J flowing 660 bbls. of clean 33.9 gravity on a compressor after being redrilled and deepened to 8,780 feet and finished with a 5¾-inch liner including 67 feet of perforated.

Standard's field department had a busy week because in addition to completing wells in Kettleman North Dome, the company finished wells in the Inglewood, Montebello and Mountain View fields. At Inglewood, the company completed No. 18 Cone for Shell and K. & I. Corp. but it failed to hold up its initial flow and the company started preparations to install a compressor. No. 18 Cone was brought in flowing 610 bbls. of 24.4 gravity per day from 3,340 feet after the hole had been finished with a 6⅝-inch liner carrying 789 feet of perforated. Standard is operating this property for Shell and K. & I. Corp. which acquired the Cone and several other leases from Pacific Western Oil Co. last year. Standard and Honolulu Oil Corp. each own 50 per cent of K. & I. Corp., otherwise known as Kettleman & Inglewood Corp., organized at the time of the purchase of holdings of Pacific Western Oil Co. No. 84 Baldwin of Standard Oil Co. in the Montebello field of Los Angeles Basin was finished pumping 119 bbls. of 23.9 gravity per day from 2,985 feet after being plugged back from 3,050 feet and completed with a 4½-inch liner including 762 feet of perforated. In the Mountain View field of Kern County Standard No. 1 Warren was brought in pumping 180 bbls. of 24.8 gravity per day at 5,188 feet, being plugged back from 5,285 feet. Within a week or so, the Republic Petroleum should make a production test of its second test in the El Segundo district where it finished a small pumper last year. Its No. 2 El Segundo was cemented a few days ago and should be given a production test within 10 days.

Eastern Fields

(Continued from Page 52)

the No. 15 on the Alvin Wince farm to 1,877 feet, the Injun sand. There was a showing of oil in the Salt sand and a slight showing of gas in the Injun sand, but it is being abandoned.

In Roane County L. C. Young and others completed a test on the Fritz Kee 167½-acre farm in Harper district in the Salt sand at a depth of 1,730 feet. It is a fair gas well gauging a half million feet a day, natural.

In Wayne County the United Fuel Gas Co. completed their No. 4,583 on the Edmond Fry farm in Grant district in the Big Injun sand, and it is a gas well gauging 160,000 feet a day.

Other Operations

In Boone County O. B. Cunningham and others have made a location for a test on the J. H. Perdew farm in Washington district. In Sherman district the Pure Oil Co. has made a location for No. 81 on the Federal Coal Co. tract on Hopkins Fork.

In Cabell County W. C. Kingery and others are moving in material for a test on the C. B. Harbour farm on the Guyandotte River in McComas district. The Kentucky West Virginia Gas Co. is spudding in the test on the J. B. Bailey farm.

In Calhoun County H. S. Adams and others are rigging up the test on the J. L. Stump farm in Lee district. The Clark Drilling Co. has started drilling the test on the Perry Meadows farm in Washington district. Massey and Jarvis are down 1,450 feet in a test on the C. B. Parson farm. In Sheridan district Farrell and Cain have completed the rig for a test on the Lucy Haverty farm.

In Gilmer County H. B. Scott and others have part of the material on the ground for a test on the G. G. Griffin and Bay McClain farm in Center district. In DeKalb district Ernest Bush has made a location for a test on the Cunningham and Grogg lease. In Center district Leonard Cain has made a location for a test on the J. R. Boggs farm.

In Marshall County the Manufacturers Light & Heat Co. is building a rig for a test on the V. B. Pyles farm on Laurel Run in Liberty district. The Valley Run Oil & Gas Co. is also building a rig for a test on the C. Yoho farm on the same stream in this district.

In Pleasants County the First National Bank and Marjorie D. Coen have started drilling No. 8 on the Fracker and Jackson farm in Grant district. In Jefferson district the Boreland Springs Oil Co. is down 800 feet in a test on the Warren Roberts farm.

In Roane County L. L. Reed and others have started drilling a test on the B. F. Hunter farm in Harper district. It is located about 600 feet west of the same owners' test on the A. G. Hinsman farm. This operator has locations for tests on the J. R. Bonnett farm and the Joseph Fields and others' lease in this district.

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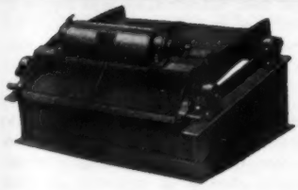

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Smith and McDannald have cemented back to 6,550 feet on Tide Water Oil Co. No. 2 Smedes in the St. Martinsville field and are preparing to make a drill stem test through perforated casing. This is the third plug back job to be made. No. 1 fee in the same field being drilled for Continental Oil Co. is drilling below 7,490 feet. It will be drilled to approximately 8,000 feet after which an electrical coring test will be made of the hole. At the South Houston field No. 1 Phillips is being rigged up for themselves while another rig is being moved in for Stanolind Oil & Gas Co. No. 1 Schwartz. In the meantime, five other active rigs are located as follows: One at Jenning, La., for Shell Petroleum Corp., one at Louise for Pure Oil Co., one at Long Lake for Tide Water Oil Co., one at East Texas for the same company, and one in Zavalla County for the Bay Oil Corp.

C. & C. Drilling Co. has rigged up and is preparing to deepen Salt Dome Oil Corp. No. 2 Lawrence after production had declined to about 2 bbls. per hour. The well is on the Cotton Lake prospect, northern Chambers County, and was completed last week for an initial production of 20 bbls. per hour through a quarter-inch choke. Bottom of the hole is 6,661 feet. At the South Houston field, C. & C. Drilling Co. and Dick Schwab No. 1 Bennett is nearing the expected pay horizon at 4,000 feet.

Edwards Drilling Co. has spudded in David B. MacDaniels No. 1 Nona Mills on the Grigsby prospect in Hardin County and is drilling below 3,000 feet in shale. In the meantime, Texas Canadian Oil Co. No. 1 Bland in Orange County is in shale below 2,600 feet and at the Dickinson field, Galveston County, Kenben Oil Co. No. 1 Stewart is drilling in shale below 4,300 feet.

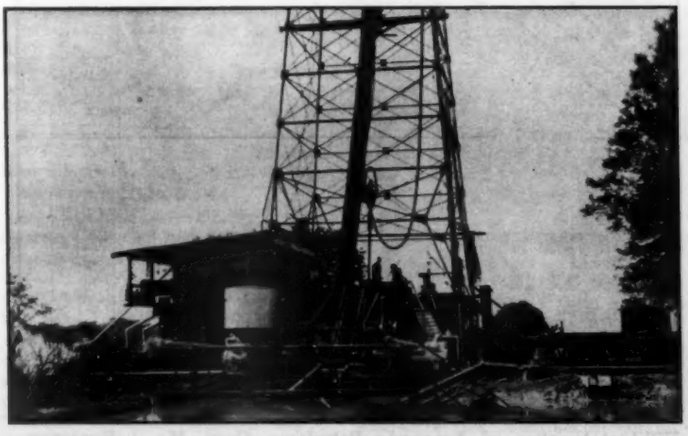
George Echols is completing two wells, one of which is in the Gillis field for Fohs Oil Co. and the other in the Loma Novia field for the Sun Oil Co. Contracts for two wells were let by the two companies in these respective fields. Two other active rigs are located at Saxet Heights for the Taylor Refining Co. and at the Placedo field, No. 2 Snyder is being drilled for the Sun Oil Co.

Rutherford Drilling Co. has cemented surface casing on No. 6-B Cobb and No. 1 Rugelsey and is drilling in shale below 6,400 feet on No. 1 Langham, all of which are located in the Van Vleck field for Skelly Oil Co.

Ben (Bud) Coyle marked up another producer for Herton Oil Co. at the Jeanerette field and received contracts for two more wells. No. 3 Roanes flowed 36 bbls. per hour through a five-sixteenths inch choke from a depth of 6,688 feet. Contracts were let for No. 2 and 3 Banta.

Rowan & Hope of San Antonio are starting two Gulf Coast tests for Terminal Oil Products Co. of the same city. One will be located in the Four Bluffs region of Nueces County about 9 miles south of Corpus Christi to be known as No. 1 Thurman. It will be a 6,500-foot test. On the Lavaca-Colorado County line northeast of Sublime, Rowan & Hope will drill a test for the same company which holds a block of acreage together with Magnolia Petroleum Co. and Indian Territory Illuminating Oil Co. to go 5,000 feet or to the Conroe.

Al Buchanan, San Antonio, completed wells in three fields for several operators during the week. In San Patricio County, one producer was brought in for Plymouth Oil Co. and four other rigs were drilling for that company in the field. A wildcat being drilled west of the field for Benedum & Trees Oil Co. may open new production. The test cored saturated sand bottomed at 6,116 feet but production tests showed water. Completion for a producer is now being attempted. The remainder of Al Buchanan's 14 rigs are drilling in Duval County in the Loma Novia, Seven Sisters and Piedra Lumbre fields and one rig is drilling a test southwest of the Labbe field for Stanolind Oil & Gas Co. Completions were made in Loma Novia for the Texas Co., and in Seven Sisters for Blanco Oil Co. and Shell Petroleum Corp.



Type of rig used by C. & C. Drilling Co. in drilling the discovery well of the Cotton Lake field, northern Chambers County

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Texas and Louisiana Gulf

By F. L. SINGLETON

OPEN NEW AREA IN REFUGIO; AMELIA WELL IS CRATERING

HOUSTON, Tex., April 27.—Quintana Petroleum Co. No. 1 Fannine Heard, about a mile and a half north of the McFaddin-O'Connor district in the Thomas Webb Survey, Refugio County, opened a new producing area when it flowed 1,430 bbls. of pipe line oil per day through a three-eighths inch choke with tubing pressure 875 pounds and casing pressure 900 pounds.

The hole was drilled to 5,968 feet and with 7-inch casing cemented on bottom, was tested through perforated casing from 5,850-54 feet. Production is from the Frio sand topped at 5,838 feet. This is the largest producer ever completed in this district and it is producing from a deeper horizon than the other eight oil wells in the McFaddin-O'Connor district.

Cotton Lake

Salt Dome Oil Corp. and Gem Oil Co. No. 2 Lawrence, completed last week as the discovery well of the Cotton Lake prospect, northern Chambers County, is pulling screen to deepen after production had dropped to about 2 bbls. per hour and it began to make 15 per cent salt water. On a 24-hour period it made 53 bbls. of fluid of which 15 per cent was salt water through a three-eighths inch choke with tubing pressure 80 pounds. The decline in production came as a surprise since the well was originally completed for an initial production of 20 bbls. per hour through a quarter-inch choke with tubing pressure 750 pounds.

Since the well was completed in only 9 feet of oil sand and being only three-quarters of a mile from a dry hole, it is the general opinion the well is situated on the edge of the structure. It will be deepened to the Frio horizon and if no sands are encountered it will probably be plugged back to its present depth and recompleted.

Amelia

Glenn H. McCarthy No. 2 Long, in the Amelia field, northern Jefferson County which blew out last week, caught fire and then extinguished itself when the hole bridged over, started making an estimated 50 bbls. of oil per hour with salt water, and, after running wild for a few hours, it caught fire the second time and all attempts to conquer it have failed. The hole has started cratering and it is reported a directional hole will be drilled in an attempt to kill it. The well blew out making nothing but dry gas from a depth of 5,581 feet and it is the general opinion it has drilled itself deeper which resulted in the flow of oil with the gas.

To the south in the A. Savery Survey, Humble Oil & Refining Co. has abandoned No. 2 R. C. Miller at 6,881 feet, and has made location for No. 1 Pinchback, 689 feet west of the most easterly east line and 460 feet at right angles from the most easterly south line of the C. Williams Survey. Further south in the H.T. &B. Survey, section 16, Magnolia Petroleum Co. No. 1 Funchess wildcat is drilling in shale below 6,300 feet.

Anahuac

Only three completions were recorded for the Anahuac field, Chambers County, Humble Oil & Refining Co. No. 6 Tyrell flowed 28 bbls. per hour through a quarter-inch choke from a depth of 7,085 feet. It is in section 52, H.&T.C. Survey. In the north part of the field in the James McGahey Survey, Sun Oil Co. No. 12 White was completed for an initial production of 29 bbls. per hour through a quarter-inch choke from a depth of 7,084 feet. No. 11 White flowed 27 bbls. per hour through a quarter-inch choke from a depth of 7,084 feet.

Harris County

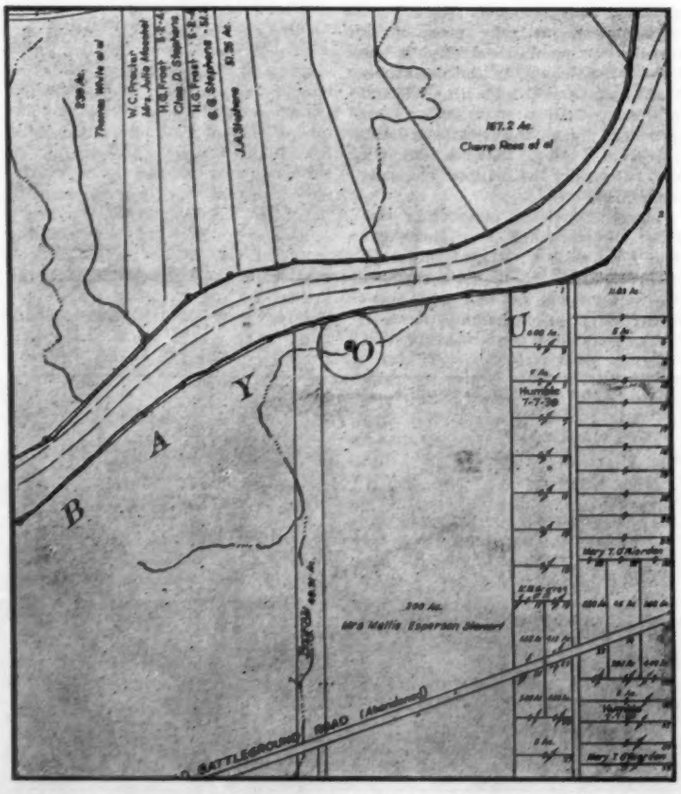
Dick Schwab and others No. 1 Bennett approximately 1,500 feet northwest of production at the South Houston field, Harris County, topped oil sand at 3,990 feet and cored sand to 4,012 feet, total depth where the operators are preparing to run 7-inch casing. It is Tract 26, H.T.&B. Survey. To the southeast Smith and McDannald No. 1 Reynolds flowed 438 bbls. per day from a depth of 3,970 feet and Sterling Oil & Refining Co. No. 2 Summers flowed 430 bbls. per day through a quarter-inch choke with tubing pressure 500 pounds.

Calhoun County

On the Seadrift prospect, Calhoun County, Continental Oil Co. has abandoned No. 2-A American Realty Co. after a drill stem test at 6,401 feet, failed to show anything of importance. No. 1 Vandenberg is a new location 1,320 feet north of the south line and 660 feet west of the east line of section 12, Block "H" in the Pedro Garcia Survey.

Turtle Bay

At the Turtle Bay field, Chambers County, Stanolind Oil & Gas Co. No. 2 Middleton is bottomed in sand at 6,609 feet and 7-inch casing is being cemented after an electrical coring test was made of the hole. Discorbis was topped at 5,680 feet and Heterostegina at 5,993 feet. It is the first well drilled to the southeast and it is several feet higher than the company's other three wells which indicates the high part of the structure extends in this direction. The company's No. 1 State in the bay is bottomed in a sidetracked hole at 6,618 feet and casing is being cemented. The hole was originally drilled to 7,459 feet after 1,560 feet of oil and 60 feet of salt water was tested on a drill stem test in the old hole from 6,590-6,615 feet.



Wildcat location of Amerada Petroleum Corp. No. 1 Esperson, located in the Penn City area, Harris County

(Map courtesy of W. W. Zingery, Houston, Tex.)

Dickinson

The 9,100-foot sand at the Dickinson field, Galveston County, failed to produce in Humble Oil & Refining Co. No. 2-B Bayou Development Co. and the hole has been plugged back to 8,313 feet where it will be given another test. It is in the John Sellers Survey. To the north in the J. S. Jones Survey same company's No. 2 Magle was tested through perforated casing from 7,989-8,001 feet and flowed 18 bbls. per hour through a quarter-inch choke. The company's No. 7-A Stewart was completed for one of the best wells in the field when it flowed 35 bbls. per hour through a quarter-inch choke from a depth of 8,035 feet. The sand was topped at 8,021 feet and 7-inch casing was cemented at 8,017 feet.

Penn City

Amerada Petroleum Corp. No. 1 Esperson, in the Penn City area, east of Houston in Harris County is preparing to core from 5,479 feet after salt water sand was cored below 5,400 feet. Marginulina was topped at 5,340 feet and Frio at 5,439 feet. Location is in the George Patrick Survey.

Orange County

Some attention was attracted to Coker Oil Co. No. 1 G. T. Mansfield, in the J. W. Hill Survey, Orange County, due to a reported showing of oil and gas at approximately 2,000 feet. There is very little information and it is unknown just where this sand was topped. South of the Cow Bayou field, Tide Water Oil Co. is reported to have taken a block of about 6,500 acres on the strength of geophysical work.

Coastal Louisiana

Superior Oil Producing Co. No. 2 Bradley, 990 feet south, 37 degrees east of its No. 1 Bradley, the first oil well to be completed in the Bayou Mallet field, Acadia Parish, La., passed up the discovery horizon and is drilling below 7,100 feet. An electrical coring test showed 7½ ohms resistivity in sand from 6,387-97 feet which is the approximate from which No. 1 Bradley is producing from.

At the Tepetate field, Acadia Parish, Continental Oil Co. No. 1 Ortego, section 29, was completed through perforated casing from 8,316-21 feet,

(Continued on Page 74)

Kansas Developments

TWENTY TESTS PLANNED FOR HUGOTON, KANSAS, GAS AREA

By DAL DALRYMPLE

The Hugoton gas field of southwestern Kansas is due for a considerable development program within the next few months. The McKnab Oil & Gas Co., of Winfield, Kans., plans to drill 20 or more wells in the Hugoton area this year in order to increase its supply of gas, following the granting of a franchise at Detroit, Mich., it has been announced. The gas will be transported by pipe line to the Michigan metropolis. The McKnab company now has 21 producers in the Hugoton field.

Magnolia Petroleum Corp. No. 1 Mamie Harris, NE NE NW section 9-26-4w, in the north end of the Hilger pool of southeastern Reno County, flowed 744 bbls. of oil in 12 hours, and was stronger at the finish than at the start of the test, which was made after acid treatment. It was shut in for tankage at the end of the 12-hour period. Production was from Viola lime at 4,113-18 feet.

The daily allowable production for Kansas, effective May 1, is 150,100 bbls., T. A. Morgan, director of the conservation division of the Kansas State Corporation Commission, announced at Wichita. This is an increase of 4,100 bbls. daily over the U. S. Bureau of Mines recommendation of 146,000 for April, which was raised to 150,000 bbls. by state officials to make up accumulated shortages. The increase in demand for refined products accounts for the boost in the monthly allocation. The Kansas potential the past month was 977,864 bbls., and it is expected to be approximately the same this month.

Rice County

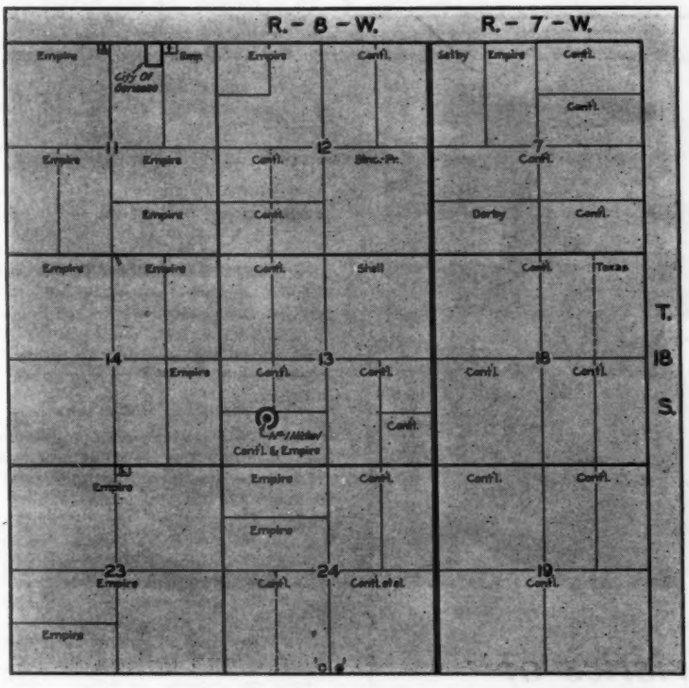
Gulf Oil Corp. No. 4 Stoltz, SE SW NW section 32-19-10w, in the Silica area of Rice County, made potential of 1,292 bbls. of oil after acid treatment and was completed at 3,308 feet, total depth. Top of Siliceous lime was 3,289 feet. It made potential of 1,092 bbls. before acidizing. In the Raymond area, Slick, Pryor & Lockhart No. 3 Mezger, SW NE NE section 21-20-10w, was completed after making potential of 736 bbls. of oil. Production was from Siliceous lime, topped at 3,347 feet, total depth 3,353 feet.

Magnolia Petroleum Co. No. 2 Smith, SE SW NE section 16-20-9w, topped Siliceous lime at 3,253 feet and was bottomed at 3,265 feet. It pumped 209 bbls. in 14 hours and made 24-hour potential of 310 bbls. Garden and others No. 1 Roberts, SW NE NW section 11-21-7w, in the Wherry pool, topped Chat at 3,384 feet. Wilcox sand was topped at 3,740 feet and based at 3,780 feet. Top of Siliceous lime was at 3,804 feet and at 3,872-75 feet, total depth, the hole filled with water. It was plugged back to 3,400 feet, shot and acidized, and pumped 15 bbls. of oil and 8 bbls. of water in 24 hours. Gulf Oil Corp. No. 5 Smith, SW SE NE section 16-20-9w, made potential of 475 bbls. of oil before acidizing and increased that to 707 bbls. of oil and 20 bbls. of water after acidizing, and was completed at 3,256 feet, total depth. Top of Siliceous lime was 3,233 feet.

Empire Oil & Refining Co. No. 1 Burch, SW SE NW section 21-18-9w, had a hole full of water at 3,317 feet, total depth, and was dry and abandoned. Top of Kansas City lime was 2,870 feet, Conglomerate 3,208 feet, Siliceous lime 3,275 feet. Continental Oil Co. and others No. 1 Roche, SE NW SW section 4-18-7w, in the Galt area east of Geneseo, was dry and abandoned at 3,338 feet in Siliceous lime topped at 3,317 feet. Top of Viola lime was 3,233 feet.

New work in Rice County was as follows: Simpson & Noble and Stanolind Oil & Gas Co. No. 1 Bowman, SW SW NW section 22-19-10w, wildcat, location; C. B. Davis and others No. 9 Dueser, SE SW SW section 31-19-10w, moving in material; same operators No. 10 Dueser, SW SE SW section 31-19-10w, moving in material; Bradley Oil Co. No. 1 South Wendell (formerly reported No. 6 Wendell), NW NE SE section 32-19-10w, drilling at 1,300 feet; same operator's No. 6 Wendell, NE SE NE section 32-19-10w, rotary rig; Shell Petroleum Corp. No. 1 Maughlin, NE NW SE section 11-20-8w, building rotary rig; Darby Petroleum Co. No. 1 Johnson, SE SE SW section 10-21-7w, building rotary rig; E. J. Shaffer, No. 1 Hauschild, NW NW NE section 15-21-7w, moving in material.

Gulf Oil Corp. No. 7 F. E. Steckel, SW cor. section 30-19-10w, in the Silica area of Rice County, swabbed 128 bbls. of oil and 10 bbls. of water in 24 hours. Total depth was 3,315 feet, top of Siliceous lime 3,284 feet. It was plugged back to 3,310 feet and acidized but had not been tested. C. B. Davis and others No. 8 Dueser, NW SW SW section 31-19-10w, drilled to 3,278 feet and pumped 518 bbls. of oil in 24 hours. Top of Siliceous lime was 3,258 feet.



Map of area where Continental Oil Co. and Empire Oil & Refining Co. No. 1 Nickel, wildcat, extended Geneseo pool, Kansas, 1½ miles north

(Mid-Continent Map Co., Wichita, Kans.)

Barton County

In the Barton County sector of the Silica area, Gulf Oil Corp. No. 5 F. J. Wendel, SW NE NE section 36-19-11w, made potential of 1,121 bbls. of oil after acidizing and was completed at 3,283 feet, total depth. Before treating with acid it made potential of 989 bbls. Top of Siliceous lime was 3,274 feet. Continental Oil Co. No. 7 Risse, NW SW SE section 36-19-11w, was acidized with 5,000 gallons and made potential of 575 bbls., completed. Siliceous lime was topped at 3,288 feet, total depth 3,305 feet. Magnolia Petroleum Co. No. 7 F. Steckel, SW NW NE section 1-20-11w, made potential of 1,058 bbls. of oil and was completed at 3,292 feet, total depth. Siliceous lime was topped at 3,277 feet.

George W. Hinkle No. 1 Smith, SW NW NW section 1-17-11w, wildcat north of the Breford pool, had a hole full of water at 3,465-71 feet, total depth, and was dry and abandoned. It topped Anhydrite at 725 feet, Kansas City lime 3,115 feet, Siliceous lime 3,440 feet.

Only one new operation in Barton County was reported. Aylward and others No. 1 Wissman, NW cor. section 31-18-15w, was moving in material.

Roy Ramsey and others No. 1 Hunt, NW cor. section 10-18-11w, wildcat in eastern Barton County, topped Siliceous lime at 3,382 feet and had pay at 3,386-98 feet, total depth 3,404 feet. Production was estimated at 25 bbls. daily.

Sinclair Prairie Oil Co. No. 1 Isern, SE SE SW section 25-19-11w, in the Silica area, made potential of 428 bbls. of oil after acidizing with 3,000 gallons, and was drilling deeper at 3,311 feet. Siliceous lime was topped at 3,289 feet. Gulf Oil Corp. No. 4 F. J. Wendel, SE NE NE section 36-19-11w, pumped 195 bbls. of oil in 20 hours after plugging back to 3,293 feet from 3,299 feet. Before plugging back it produced 1,068 bbls. of oil and 356 bbls. of water on potential test. Same operator's No. 6 F. J. Wendel, C W half SE NE section 36-19-11w, made potential of 1,003 bbls. of oil, and was acidized but not tested. Top of Siliceous lime was 3,276 feet, total depth 3,287 feet. Phillips Petroleum Co. No. 3 Matzek, SE NW NE section 36-19-11w, pumped 134 bbls. of oil and 113 bbls. of water after acidizing. Siliceous lime was encountered at 3,305 feet, total depth 3,322 feet.

Russell County

Sam Murphy and others No. 1 Enchutz and Schaffer, SW cor. section 10-15-13w, wildcat north of the Sellens area in southern Russell County, made potential of 515 bbls. of oil in 24 hours after acid treatment and was completed. Top of Oswald lime was 3,040 feet. Siliceous lime, the producing horizon, was topped at 3,311 feet, total depth 3,327 feet. Before acidizing it made potential of 230 bbls. of oil in 24 hours, down four hours.

Smoky Hill Oil Corp. No. 5 Miller, SE SE SW section 30-14-13w, was the largest Russell County producer completed during the week. After acid treatment with 8,000 gallons it made potential of 1,285 bbls. Top of Anhydrite was 668 feet, Topeka 2,590 feet, Oswald lime, the producing

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zone, 2,860 feet, total depth 2,955 feet. Southern Oil Co. and others No. 1 Berrick, NW NE NE section 6-15-13w, topped Oswald lime at 2,911 feet, and was bottomed at 2,926 feet. After acidizing it pumped and flowed 503 bbls. in 18 hours and then made potential of 848 bbls. completed. A. H. Witt No. 1 Witt, NW NW SE section 3-14-15w, made potential of 683 bbls. of oil in 24 hours and was completed at total depth of 2,550 feet. Production was from Tarkio lime, topped at 2,525 feet. Top of Anhydrite was 918 feet. Signal Oil Co. No. 3 Sellens, SW SE NW section 26-15-13w, was completed after acidizing and making potential of 203 bbls. of oil. Oswald lime was topped at 2,991 feet, total depth 3,090 feet. Signal Oil Co. and Marathon Oil Co. No. 2 Sellens, SE SE SW section 26-15-13w, was an abandoned location.

New work in Russell County: Hartman & Blair No. 1 Johnston, NW cor. section 11-13-14w, wildcat building rig; Smoky Hill Oil Corp. No. 6 Miller, SW SE SW section 30-14-13w, building rig; Stanolind Oil & Gas Co. No. 1 Roesner, SE cor. section 9-15-13w, location.

Hartman & Blair and others No. 1 Boxberger, NE NE NW section 33-12-14w, topped Siliceous lime at 3,286 feet, was bottomed at 3,292 feet, and swabbed 70 bbls. of oil in 10 hours. Texas Co. No. 2 Holland, C E half NW SW section 13-14-15w, was acidized with 1,000 gallons and made potential of 523 bbls. of oil, cutting 10 per cent water, in 19 hours. Siliceous lime was topped at 3,244 feet, total depth 3,271 feet. Sinclair Prairie Oil Co. No. 4 Hefferman, NW NW NE section 26-15-13w, topped Siliceous lime at 3,236 feet, drilled to 3,270 feet and oil rose 800 feet in the hole in eight hours.

Estimated Production

Estimated daily average production in Kansas for the week ending April 25 and for the preceding week is as follows:

	Barrels	
	April 25	April 18
Oxford City	7,750	7,825
Burrton	13,500	13,600
Ritz-Canton	6,725	6,725
Hollow-Nikkel	4,550	4,625
Voshell	2,275	2,325
Ellsworth County:		
Lorraine-So. Lorraine	8,594	7,792
Other pools	1,544	1,655
Rice-Barton Counties:		
Chase	10,625	9,106
Raymond	4,065	3,537
Silica	10,724	9,181
Kessling	3,064	2,616
Miscellaneous Rice	4,200	3,039
Miscellaneous Barton	2,022	2,073
Russell County:		
Fairport	2,620	2,662
Gorham	4,672	3,265
Russell	3,150	3,341
Other pools	11,859	6,552
Sedgwick County:		
Valley Center	1,370	1,408
Greenwich	1,404	1,423
Robbins	1,480	1,506
Eastborough	824	842
Other pools	476	512
Ellis County	1,368	1,781
Kingman County	580	678
Stafford County	1,698	1,954
Greenwood County	8,750	8,750
Butler County	17,990	18,500
Other fields	20,196	19,487
Total Kansas	159,075	147,750

Reno County

Shell Petroleum Corp. No. 1 Nunemaker, C S half S half NW section 11-26-9w, fourth producer in the Lerado pool of southwestern Reno County, was officially completed, with 24-hour potential of 11,123 bbls. of oil. It topped Chat at 3,870 feet. Viola lime, the producing horizon, was topped at 4,131 feet, total depth 4,146 feet. After acidizing with 1,000 gallons, it flowed 3,935 bbls. in six hours.

In the Burrton area, Olson Drilling Co. and Shell Petroleum Corp. No. 2 Sabin, C SW NE section 24-23-4w, made potential of 678 bbls. of oil and was completed at total depth of 3,375 feet. It was acidized with 1,000 gallons. It was producing from Chat, topped at 3,249 feet. Derby Oil Co. No. 3 Seedle, SW NW SW section 17-24-4w, topped Chat at 3,321 feet, drilled to 3,391 feet, total depth, and plugged back to 3,377 feet. After acid treatment it made potential of 606 bbls. of oil. Sinclair Prairie Oil Co. No. 2 Seedle, SW SW NE section 17-24-4w, flowed 200 bbls. of oil in 21 hours, and after acidizing with 2,000 gallons made potential of 338 bbls. Top of Chat was 3,291 feet, total depth 3,373 feet, completed.

Texas Co. No. 1 Collins, C NE NW section 16-24-4w, was deepened from old total depth of 3,340 feet to 3,380 feet, and made potential of 598 bbls. of oil, recompleted. Rose Spring Drilling Co. and others No. 1 Bauman, NW NW SE section 30-24-4w, had a hole full of water at 3,400 feet and was dry and abandoned at 3,503 feet, total depth. Chat was topped at 3,353 feet. Marathon Oil Co. No. 1 Priddle, C SW NE section 16-24-4w, topped Chat at 3,309 feet, drilled to 3,386 feet, total depth, and was acidized. It made potential of 509 bbls. of oil and was completed.

The following new work in Reno County was reported: Shell Petroleum Corp. No. 2 Seedle, SW SW NW section 16-24-4w, building rotary rig; National Refining Co. No. 1 Bell, NE cor. section 36-24-5w, location; Derby Oil Co. and others No. 1 Beltz, SE SE SW section 4-26-4w, building rotary rig; Rose Springs Drilling Co. and others No. 1 Williams, SE cor. section 5-26-4w, cellar.

Ellis County

Three new wildcat tests were reported in Ellis County. Wolf Creek Oil Co. and others No. 1 Polifka, SW SW NE section 24-13-18w, near Hays in central part of the county, was a location. Rose Spring Drilling Co. and others No. 1 Union Pacific Railway, NE cor. section 9-13-20w, near Ellis in the western part of the county, was a location. Empire Oil & Refining Co. No. 1 Herl, SE cor. section 22-15-19w, in southwestern part of the county, was a rig.

Trego County

Work had started at one new operation in Trego County. Alma Petroleum Co. and McNeely No. 1 Kraus, C SE SE section 15-11-23w, was building rotary rig.

Ellsworth County

James Davis No. 1 Edwards, SW SW SE section 34-17-8w, in southern Ellsworth County in the Geneseo sector, made potential of 1,501 bbls. of oil and was completed. Top of Conglomerate was 3,165 feet, Siliceous lime, the producing horizon, was topped at 3,244 feet. The hole was bottomed at 3,247 feet.

Ponds were being dug at James Davis No. 2 Edwards, NW SW SE section 34-17-8w, the only new operation in the county.

Harvey County

Western Kansas Oil & Refining Co. No. 1 Warkentin, C SW SW section 1-23-2w, wildcat south of the Halstead area in Harvey County, made potential of 569 bbls. of oil in 24 hours and was completed at 3,001 feet, total depth. Production was from Chat, topped at 2,970 feet. The

pay was had at 2,995 to 3,000 feet. Top of Kansas City lime was 2,355 feet.

No new work was reported in Harvey County.

McPherson County

There were no completions and only one new test in McPherson County. Continental Oil Co. and others No. 2 Goering, NE NE SW section 29-21-1w, was a location.

Kingman County

One new wildcat test was started in Kingman County. D. H. Lauck and others No. 1 Prather, C SE section 18-27-8w, in the northern part of the county, near Browns Spur, was a cellar.

Stafford County

In the Richardson area of Stafford County, Stanolind Oil & Gas Co. and others No. 3 Heyen "B," SW NE NE section 31-22-11w, topped Siliceous lime at 3,536 feet and was completed at 3,546 feet, total depth. It made potential of 1,152 bbls. of oil.

Lario Oil & Gas Co. and others No. 1 Andress, C NW NE section 1-21-13w, had a hole full of water at 3,536 feet, total depth, and was dry and abandoned. Anhydrite was topped at 672 feet, Kansas City lime 3,227 feet, Simpson 3,470 feet, Siliceous lime 3,485 feet. It had a showing of oil but acidizing failed to make a commercial producer. It was a wildcat northeast of the Gates area and just south of the Barton County line.

One new test in Barton County was reported. Empire Oil & Refining Co. No. 1 Sifers, NE NE SW section 3-21-11w, was a location.

Rush County

In the Otis gas area of Rush County, Moore Oil & Gas Co. No. 1 Schroyer, C NW section 12-18-16w, produced an estimated 73,000,000 feet of gas daily and was completed. Gas sand was had at 3,515-52 feet, total depth.

Butler County

Vickers Petroleum Co. No. 3 McCraner "A," SW SE SE section 35-24-3, in the Potwin area of Butler County, was rigging up machine. The only other new work reported in the county was the United Oil & Gas Co. No. 2-A Anderson, NE SE SE section 9-27-4, in the North Augusta area, had Kansas City lime at 1,949-51 feet, with a slight showing of oil, and was setting 6-inch casing.

Greenwood County

Completions in Greenwood County included one producer and one dry hole. Coulter No. 1 Lockhard, NE SE SE section 16-26-13, pumped 75 bbls. of oil in 24 hours after a 60-quart shot, and was completed. It had Peru sand at 1,105-27 feet, total depth. George Hedges No. 1-B Brinker, NW NW SW section 24-24-9, was dry and abandoned at 2,210 feet, total depth.

New work in Greenwood County was as follows: W. M. Moore Oil & Gas Co. No. 6 Pixley, SE SE NE section 7-22-10, was a rig; Ward McGinnis and others No. 1 Ellis, NE NW SW section 34-22-11, was moving in machine; Parrish & Landon No. 1 Moran, SW SW NW section 15-24-12, location.

Coffey County

Franklin Drilling Co. No. 4 Rossillion, SW SE SE section 1-23-14, was the only completion in Coffey County. It topped lime at 1,514 feet, had pay at 1,737-48 feet, total depth, and pumped 10 bbls. oil per day.

One new Coffey County test was reported. Henderson & Holden No. 1-A Levering, NE NE SE section 12-23-14, was drilling at 150 feet.

Cowley County

Four completions in Cowley County included three failures and one small producer. Lewis Production Co. No. 1 Carper, SE SW NW section 11-31-4, had pay at 3,017-22 feet, total depth. After a 30-quart shot it pumped 15 bbls. of oil a day and was completed. Same operator's No. 1-A Sherwood, NE NW NW section 14-31-4, was dry and abandoned at 3,055 feet, total depth, 3 feet in Mississippi lime. Sand topped at 3,019 feet carried water. Carey and others No. 1-A McCullough, SW SW NW section 13-33-4, topped Kansas City lime at 2,565 feet, Mississippi lime 3,101-77 feet, total depth, and was dry and abandoned. Mead Brothers and others No. 1 Orr, SE SE SW section 23-31-4, wildcat, was dry and abandoned at 3,044 feet, total depth. Mississippi lime was topped at 2,988 feet. It had a slight showing of oil in sand at 2,951-71 feet.

New work in Cowley County: Tom Palmer No. 2 David, SE SE SW section 35-30-4, moving in material; Roth & Faurot and Texas Co. No. 3 David "A," SE NE SW section 35-30-4, building rig; Baden Production Co. No. 1 Sparks, SE SE NW section 35-33-4, wildcat, rigging up machine; Wakefield and others No. 1 Daniels, SE SW SE section 3-30-3, wildcat, spudded and shut down.

Woodson County

The two completions in Woodson County failed to commercial pay. Max Reynolds No. 1 Guy, NE NE SE section 29-25-14, wildcat, was dry and abandoned at 1,478 feet, total depth. C. L. Sheedy No. 1 Nordmyer, C S half SW NE section 19-25-14, had sand at 1,415-20 feet, and was dry and abandoned at 1,470 feet, total depth.

Two new wildcats in Woodson County were being started. Foster and others No. 1 Timm, SE NW NE section 36-25-13, wildcat in western part of the county and south of the Quincy area, had spudded. Roy Johnson No. 1 Hare, C N half NW NE section 32-25-14, wildcat east of No. 1 Timm, was rigging up machine.

Sumner County

No completions were reported in Sumner County, but work was starting at two locations. E. B. Shawver No. 3 Barlow, SW SW NE section 33-31-1w, was building rotary rig. Shell Petroleum Corp. No. 4 Community, NE NW NE section 14-32-2e, an old well being deepened from 2,117 feet, was drilling at 2,328 feet.

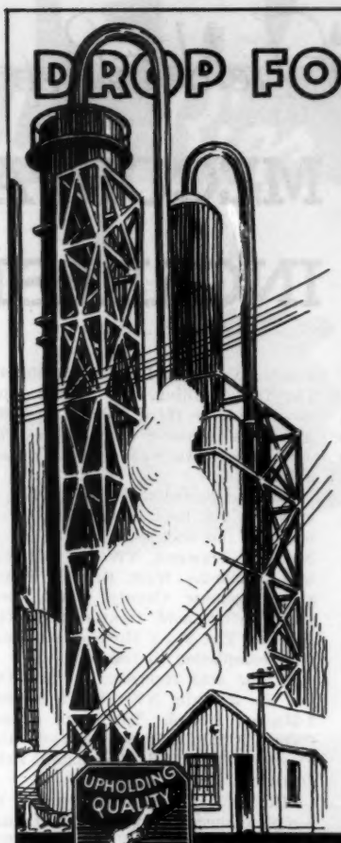
Grant County

Piney Oil & Gas Co. No. 1 English, C SW section 3-29-36w, in Grant County, set 12-inch casing at 620 feet and was waiting on cement. It was the only new work reported in the county.

Finney County

Helmerich & Payne and others No. 1 Jones, C SE section 34-26-34w, wildcat in the southwest corner of Finney County, was a rig.

Fred W. Robertson, purchasing agent for Skelly Oil Co., has returned to Tulsa from an inspection tour of company properties in Arkansas.



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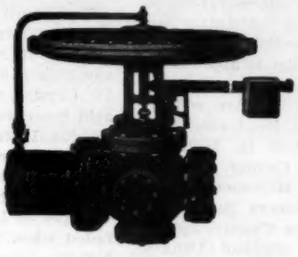

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Michigan Field Report

By
PAUL A. ELLIOTT

MECOSTA-MONTCALM WELLS INCREASING GAS POTENTIAL

MUSKEGON, Mich., Apr. 27.—Natural gas completions as well as permits "stole the show" in Michigan last week despite the critical need for new oil discoveries and increased completions in proved fields to meet market demands for Michigan crude still far in excess of the available supply.

Natural gas potential of the Tri-Townships field of Mecosta and Montcalm Counties, largest in the state, was boosted to 1,250,000,000 feet today as three new wells were brought in over the week end: Hyatt and Norton No. 1 Ward Gibbs, section 3, Belvidere Township, Montcalm County, 47,500,000 feet; Fletcher and Leman No. 2 Edward Hibee, section 9, Belvidere Township, 38,900,000 feet, and Ide and Glavin No. 5 Gas Co. No. 1 Bert Satterlee, section 29, Millbrook Township, 10,300,000 feet.

Two unsuccessful gas tests indicated the northern edge of the Tri-Townships field of Mecosta and Montcalm Counties, largest in the state. The Austin Township, Mecosta County field, serving Muskegon, was extended northward toward Big Rapids by the first successful gasser in Colfax Township, adjoining Austin. Largest of the other three wells was completed in the Hinton Township, Mecosta County, section of Tri-Townships field, a smaller well in Belvidere Township, Montcalm County, and the smallest in Millbrook Township, Mecosta County. The two dry holes were in Millbrook.

Two small producers in Crystal Township, Montcalm County, two in Jasper Township, Midland County, one in West Branch Township, Ogemaw County, one in Denver Township, Isabella County, and several increases due to acid treatment aggregated only 1,280 bbls. initial for one of the lightest new completion weeks of recent months.

Midland County

Largest new oil producer of the week was Pure Oil Co. No. 2-D Laura E. Root, C N NE SE section 2-13n-2w, in the Jasper Township section of the Porter-Yost field. It made made about 275 bbls. a day naturally from the Dundee and was to be treated.

Pure No. 5 Bond-Root, C S SW NW section 2, same township, was good for about 125 bbls. a day naturally and also will be treated.

Pure No. 22 Mina Narmore, C S N SW section 15-13n-1w, Porter Township, drilled in recently but plugged back was rated a 50-bbl. well in the Dundee.

Three other Midland County tests, one in Greendale Township, Pure No. 6-A, Mattie Yost, C N SW SW section 35-14n-2w, Flynn & Larson No. 1 Ruby Greene, NW SE NE section 13, Jasper and Jetter Oil Co. No. 1 French, NE SW SE section 14, Porter, were nearing Dundee completion, the first drilling, the second shut down and the third fishing for tools after casing above the Dundee. The Jetter test was watched as an east extensioner.

An unexpectedly large production of about 220 bbls. a day was developed by the Richland Oil Co. in its No. 1 E. Hustead, NW NW SE section 36-22n-2e, West Branch Township, Ogemaw County, when completed after acid treatment in the Dundee. The No. 2 Hustead also was near completion in Dundee.

A new acid treatment of Sun Oil Co. No. 2 State, NW SE NE section 1-21n-2e, Horton Township, transformed it into a 75-bbl. producer and extended the Mills Township field eastward.

Mills Oil, Inc., as yet has failed to complete successfully its No. 1 Jaqua, NW NE SW section 6-21n-3e, Mills Township, now held up by lack of a water shutoff in the Dundee. Melling Oil & Gas Co. will deepen the No. 7 State, SE NE NW section 6, Mills from Traverse to Dundee.

Crystal Field

Two small wells were added in the Crystal Township, Montcalm County, field. Gulf Refining Co. No. 2 Harvey Fisher, SW NE NE section 2-10n-5w, Crystal, made 75 bbls. a day after acid treatment, while Rex Oil & Gas Co. No. 1 Strait, NW SE NE section 2, same township, was completed for 60 bbls. naturally. The latter also will be treated.

Hopes of a southwestern extension faded when T. F. Caldwell, Inc., No. 1 Nellie Davis, NE SE NE section 9, was a failure in the Dundee. No show was recorded.

Rowmor Corp. No. 3 John and David Husted, NW NE SW section 2. Crystal Township, also failed in the Dundee and will be plugged and abandoned.

Completion of the Jetter Oil Co. No. 1 Laurence Pitcher, SE SE NW section 5, Crystal, was further delayed by collapsed casing on top of the Dundee. It is an extension test 1½ miles from the west side of the producing area.

Denver—Isabella

McClanahan Oil Co. No. 1-A State, SW NE SW section 34-15n-3w, Denver Township, Isabella County, was rated a 25 to 30-bbl. natural Dundee oil producer and will be treated with acid.

Geneva—Midland

Brehm-Hollman No. 1 McCann, NW NW SE section 20-15n-2w, Geneva Township, Midland County, completed in February for 200 bbls. initial, was boosted to about 625 bbls. by acid treatment. An extensive drilling campaign is being conducted in Geneva with seven tests active, the deepest being King Drilling Co. No. 1 George Gould, SW NW NE section 19, nearing Dundee completion.

Beaverton—Gladwin

Two tests neared completion in the Dundee in the Beaverton Township, Gladwin County, pool last week.

Sun Oil Co. continued trying to make a commercial producer of the No. 1 James Reid, NW NW SW section 12-17n-2w, Beaverton, by giving a shot preliminary to acid treatment in the Dundee.

Triangle Oil Co. No. 1 Iosco Land Co., SE SW SE section 2, same township, farthest east of seven tests in Beaverton, started drilling into the Dundee after completion had been delayed by court action for several weeks.

Gassers

Taggart Brothers, Inc., leading operators in the Austin Township, Mecosta County, gas field, brought in a flow of about 15,000,000 feet daily from the Michigan Stray sands completing the Hal-Be-Oyle & Gas Co. test on the Paul Rennie lease, twenty-second in the field. It is located about half a mile north of previous boundaries of the field, C SE SW section 33-15n-9w, Colfax Township.

Largest new gasser of the week was Ide & Glavin No. 4 Gas Co. No. 1 A. J. Secoy, C SE NE section 25-13n-8w, in the Hinton Township section of Tri-Township field of Mecosta and Montcalm Counties. It is in the former county. Pay was in Michigan Stray sands where the well flowed about 23,000,000 feet a day.

Ross & Bernier No. 1 W. H. Fouts, C SW NE section 3-12n-7w, Belvidere Township, Montcalm County, made 8,750,000 feet daily from Michigan Stray sands.

Wiser Oil Co. brought in the smallest gasser of the quartet, the No. 1 Christine English, C NE NE section 33-13n-7w, Millbrook Township, Mecosta County, making 1,200,000 feet from the Michigan Stray.

Wiser Oil Co. also completed two disappointments, the No. 1 Bessie Deakins, C SW NW section 27, Millbrook, and the No. 2 on the same lease, C NE NE section 28. No Michigan Stray sand was found in either test, the drill striking water in the Marshall formation.

The two "dusters" indicated the northern limits of the state's largest gas field where heaving drilled has boosted the number of gas tests recently to a comparable total with oil ventures. The No. 1 was directly north of a 12,000,000-foot well completed on the Statsick lease several months ago as a mile north extension of previously proved territory.

Vickeryville

Renewed interest recently has been displayed in the Vickeryville section where the Jetter Oil Co. last fall brought in the discovery well of a prospective new field on the Long lease, Bushnell Township, Montcalm County.

Eight additional tests were under way last week in an area about 8 miles southwest of the Crystal field. The Oil Finders, Inc., No. 1 A. N. Russell, SW SE SW section 29-10n-6w, Evergreen Township, was nearest to testing the Dundee.

Star Petroleum Corp. No. 1 James Ward, NE NE NW section 20-9n-5w, Bloomer Township, Montcalm County, about 3 miles southeast of the discovery Long well, also was nearing Dundee. Other tests in the three townships were at lesser depths.

West Michigan Wildcats

Associated Petroleum Co. was reported drilling at 2,620 feet with water in the Traverse in the No. 1 J. O. and Alma Plank, SE SE SW section 29-9n-10w, Courtland Township, one of three tests in Kent County near possible completion.

Michigan Oil Exploration Co. No. 1 George W. Croff, NE SW NW section 35-7n-9w, Vergennes Township, near Lowell, was 50 feet in the Traverse without success at about 2,200 feet.

Rex Oil & Gas Co. No. 1 August Johnson, SW SE NW section 36-10n-12w, Tyrone Township, was still shut down just above the Dundee with the drillers awaiting orders to proceed.

Northern Development Co. No. 1 Fred Burke and others, SW SE NW section 26-17n-15w, Logan Township, Mason County, failed to develop commercial production after a show in the upper Traverse and started drilling to the Dundee.

Dragoon Development Co. No. 1 W. K. Young, SW NW NW section 15, same township, was scheduled to start deepening for a second Sylvania test in Logan after being shut down at 2,510 feet after failure through Dundee.

Max Pray No. 1 Victor Barothy, SW NW NW section 29, same township, first Sylvania test, was completed dry and abandoned at 3,398 feet.

James McIntosh, former Muskegon contractor, was rigging up for Jacob Bolema's No. 1 Redwing Development Co. test, new wildcat located NW NW NW section 15-21n-16w, Manistee Township and County. Another test for Bolema and the Rademaker Chemical Corp., the No. 1 Louis Sands Lumber Co., NE NW SW section 8, same township, was shut down after spudding but scheduled to resume pending settlement of legal difficulties.

Mr. Bolema and the Overland Petroleum Co. were delayed fishing for tools in the No. 1 Mary Bolt SE NW SE section 10-10n-13w, Casnovia Township, only active Muskegon County test, at about 300 feet.

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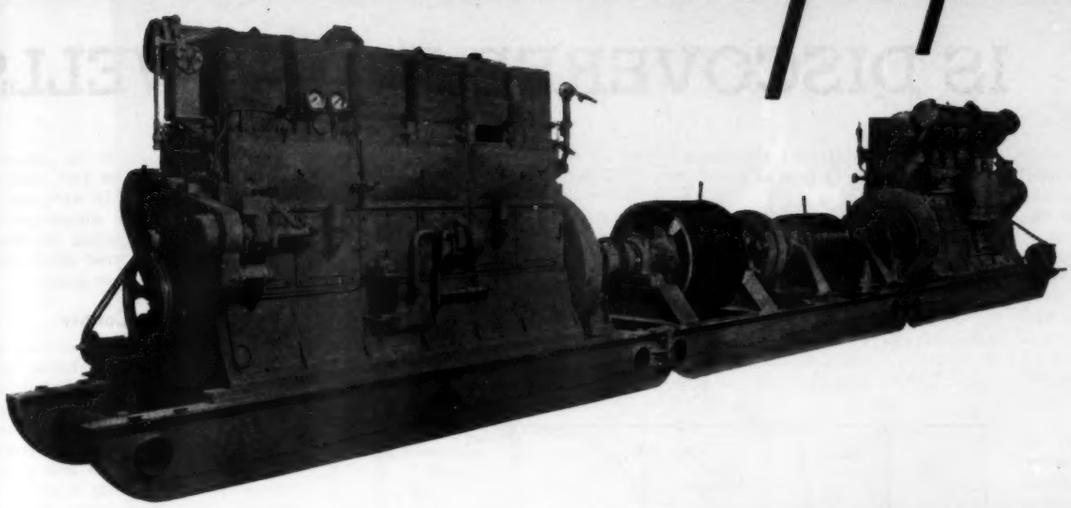

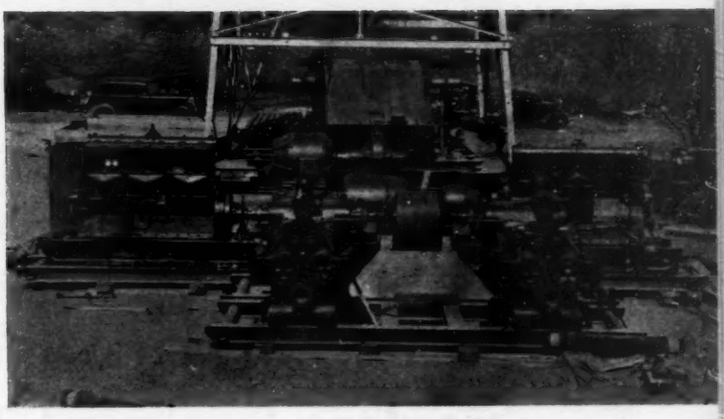

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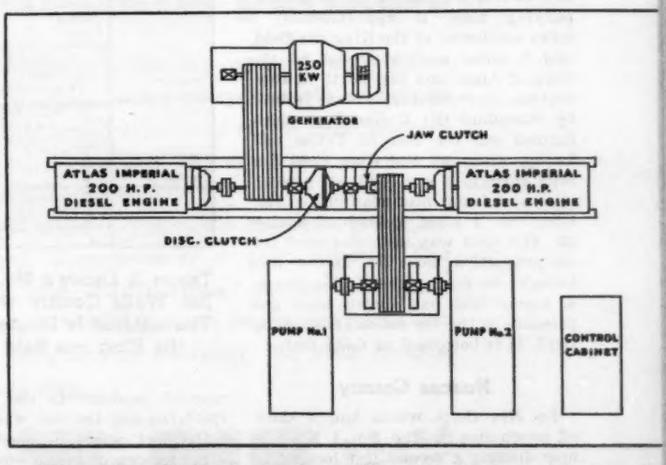

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By
GEORGE WEBER

SAN ANTONIO, Tex., April 27.—Outstanding development in Southwest Texas during the past week was the discovery of production on the eastern edge of Jim Wells County. The wildcat which tested considerable oil in the latter part of the week diverted interest from several other developments. The success of the San Patricio County wildcat which has shown oil in two different horizons is still undetermined, and the north extension test in the Lopez field of Webb County was completed as a gasser, revealing interesting data on the potential size and location of that field. Drilling in the two busiest sections of Southwest Texas, namely Duval and Nueces Counties continued strong, and wildcatting operations received few set backs.

Jim Wells

The new Jim Wells field, dependant on the completion of Texon Royalty Co. and Lucey Petroleum Co. No. 1 Rolston will be located in the northwest corner of section 17 of the Richard King Farm Lots part of the large King Ranch. The well was tested Thursday when casing was perforated at 5,380-90 feet. During the 15-minute test, 1,000 feet of 45-50 gravity oil was recovered with a working pressure of 40 pounds. Screen and liner were run and completion of the producer is expected over the week end. The test, location of which is shown in the accompanying map, is approximately 2 miles southwest of the King gas field, and 8 miles east northeast of the town of Alice, and just north of Bentonville. Surrounding acreage is held by Stanolind Oil & Gas Co., which farmed out the test to Texon and Lucey. Although the King field has been entirely a gas field, oil production was found last year in La Jita Corp. No. 1 King, located in section 22. The well was not completed for oil production, however, and it was brought in for a gasser. The Texon & Lucey test has shown high gas pressure in the gas sands of the King field. It is bottomed at 6,015 feet.

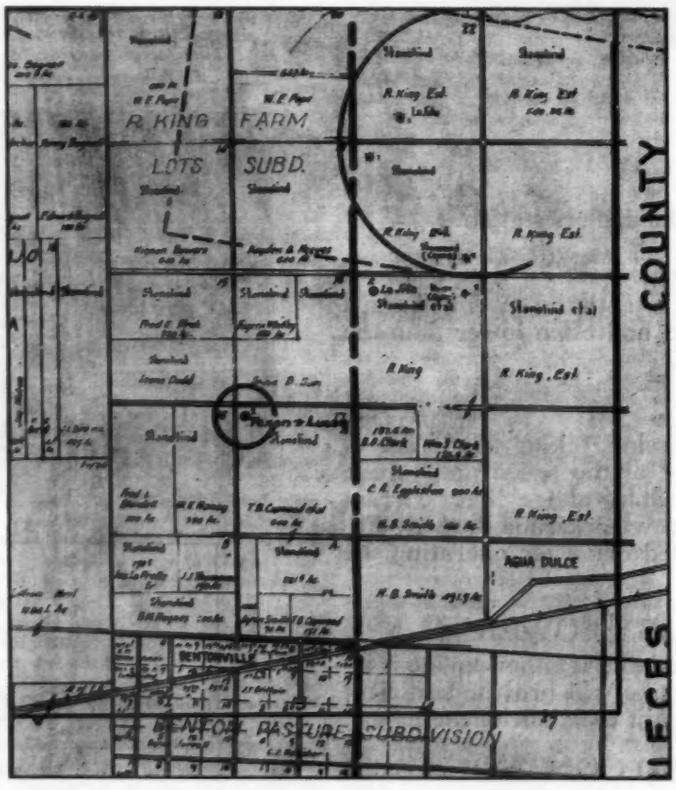
Nueces County

La Jita Corp. which had a show of production in the No. 1 King is now drilling a second test located in section 24, Nueces County, between the new oil producer and the King field. Development of this new production will not approach the pace of that in eastern Nueces County, due to the large holdings of one company in the immediate area of the wildcat.

Increasing interest in Jim Wells County has brought several operators there to drill wildcats, and the county bids to become as active an area as Nueces and San Patricio Counties adjoining it on the east. It lies between Nueces and Duval Counties, the two most active at the present time, but has never seen as much development.

San Patricio County

In San Patricio County, the most important development recently, Benedum & Trees Oil Co. No. 2 Welder in section 19 of the Welder Ranch between the Plymouth and Sinton fields again showed disappointing results. After failing to make a commercial producer in the sand at 5,696-5,710 feet the test was carried to 6,116 feet where a good saturated sand was encountered which showed well for production. Attempts at completion during the week, however, resulted in water flow, possibly due to a discrepancy in measurements and another try for production is being made.



Texon & Lucey's No. 1 Rolston, which indicates a new field for Jim Wells County with a good test from sand at 5,380-90 feet. The wildcat is located about 2 miles southwest of production in the King gas field shown across the line in Nueces County

Saxet Field

The Saxet Heights or Corpus Christi and Saxet fields of Nueces County continued to see increased activity. In the former, 11 new producers were completed and no new limits were determined during the week. The production was extended principally to the east, with one 1,600-foot extension accomplished by R. Y. Walker No. 1 Clark located east of the north edge of the field. Intensive activity in the proven acreage of the field has resulted in the drilling of close wells located among the homes on the west edge of Corpus Christi.

In the Saxet field, continued drilling centers around Clarkwood in the 4,400-foot sand with more tests beginning for the deeper 4,900-foot production. Two new producers were added to this section of the field during the week, and several others are on the sand awaiting completion early next week.

Plymouth

In the Plymouth field, activity increased with new tests on the south edge of the field beginning. One completion resulted from the weeks operations in this field.

At Taft, the Shell Petroleum Corp. No. 1 Pullin, west offset to the discovery well, No. 1 Smith tested oil at 4,885-4,915 feet. The Humble No. 1 Godwin, north offset to discovery swabbed dry at 4,005 feet, and will perforate again. This well was reentered after being abandoned dry in the horizon producing the discovery well, when a west offset found production in a higher sand.

Duval County

Duval County drilling activity continued heaviest in the Loma Novia and Seven Sisters field, but drilling in the county is widely distributed among seven fields with wildcatting adding further to the development. Loma Novia gained 13 new producers completed on inside locations. Intensive drilling programs of several operators in the south portion of the field account for the majority of completions.

The Seven Sisters field was likewise active, but drilling rigs in that field are more evenly distributed. Ten new producers were brought in, several constituting extensions on the south, southwest and east. Drilling of twin wells continues. One abanonment occurred during the week in Seven Sisters, when Humble Oil & Refining Co. No. 14-B Serna, twin to 4-B which was completed in the Government Wells sand was found dry in the upper Chernosky sand. Humble Oil & Refining Co., Atlantic Oil Production Co., Shell Petroleum Corp. and many others made producers. A northwest outpost test is getting under way in this field, as Reliance Oil & Royalty Co. and Henderson & Harvey begin rigging up on No. 1 Drummond, located in the southeast corner of Survey 308 due west of Humble Oil & Refining Co.'s Wright property which was recently opened for production, extending the field considerably to the north.

The first activity since its discovery is coming to the Loma Vista field located east of Loma Novia. Shell Petroleum Corp. is beginning a south offset test to Santa Clara Oil Co. No. 1 Welder discovery well of the new field in Survey 103. Other operators are rumored to be planning tests in the area shortly. Santa Clara Oil Co. is moving in on a wildcat location about 3 miles east of Loma Vista in the southeast corner of Survey 521.

Government Wells, Hoffman and Piedra Lumbre are active in a lesser degree than the two major fields at present.

Webb County

In Webb County, the expected completion of Luling Oil & Gas Co. No. 1 Peal, north outpost test of the Lopez field as a gasser gave that field encouraging development in spite of the failure for oil production. The test ran high; too high for oil production. It was carried below the gas

(Continued on Page 83)

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MOLY

Oklahoma Operations

By
DAL DALRYMPLE

MAY ALLOWABLE INCREASED; CITY EDGE TEST IS IN WILCOX

The Capitol extension area of the Oklahoma City field provided the major oil interest in Oklahoma the past week, only routine work being reported in a majority of the other areas. The north side of the extension took on added significance late in the week when the Barnsdall Oil Co. and Fairfax Oil Co. No. 1 Banks-Geyer, SE SW SE section 15-12-3w, just north of the city limits, found the Wilcox pay high enough to make a producer. It had Wilcox sand at 6,416-29 feet, total depth. Casing was being set, and it was not due to be tested for several days. The sand was found about 10 feet lower than in the Phillips Petroleum Co. and Black Gold Petroleum Co. No. 1 Sawyer, nearest producer and now the most northerly producing well in the extension zone.

The Oklahoma allowable production for May was set at 538,300 bbls. daily by the Corporation Commission. This is an increase of 13,300 bbls. daily over the April allowable, distributed among unprorated or stripper areas and new fields. No increase was provided for flush areas such as Oklahoma City, Fitts and Edmond, resulting in declines of potentials in percentage of potentials allowed as the daily flow.

Oklahoma County

Two of the new producers in the Capitol extension zone at Oklahoma City were officially completed. The Barnsdall Oil Co. and others No. 6 Bracht, SW SE SW section 23-12-3w, topped second Wilcox sand at 6,407 feet and was bottomed at 6,546 feet. It flowed 5,807 bbls. in 21 hours with drill still in the hole. Before deepening from 6,457 feet, it had made potential of 11,306 bbls. British-American Oil Co. No. 2 Piersol, SE cor. section 22-12-3w, flowed 4,173 bbls. in seven hours after deepening from 6,484 feet to 6,492 feet and was completed. Top of second Wilcox sand was 6,329 feet. Gas gauged 21,000,000 feet. Before deepening it made 24-hour potential of 25,031 bbls., flowing 6,301 bbls. in three hours.

In the Britton sector, finis finally was written to the Sinclair Prairie Oil Co. No. 1 Corbett, NE NW NE section 17-13-3w, wildcat. Washed in at 6,685 feet, total depth, it flowed 165 bbls. of oil net in 19½ hours, with 20,000,000 feet of gas. After deepening 10 feet to 6,695 feet, it flowed 145 bbls. in 16 hours. Then 2½-inch tubing was run to 6,398 feet. It flowed 240 bbls. in 24 hours and was completed. This test was started in April, 1935, and, although it found oil pay last July and flowed 783 bbls. in the first 15 hours, water intruded, and a long series of fishing jobs, cavings, bridges and other troubles ensued, necessitating plugging back several times, drilling outside the pipe and numerous difficult mechanical operations. It was producing from second Wilcox sand, topped at 6,655 feet. First Wilcox sand was had at 6,565-80 feet.

New work starting in Oklahoma County was as follows: Barnsdall Oil Co. No. 2 Edwards, C E half SW SE SE section 15-12-3w, building rig; same operator's No. 3 Edwards, NW SW SE SE section 15-12-3w, location; same company's No. 4 Guthrie, NE SW SW SE section 15-12-3w, location; No. 5 Guthrie, NW NW SW SE section 15-12-3w, location; same operator's No. 6 Guthrie, SW NW SW SE section 15-12-3w, location; same company's No. 7 Guthrie, NW SW SW SE section 15-12-3w, location; the No. 8 Guthrie, NE NW SW SE section 15-12-3w, location; same operator's No. 1 Cook, SE SW SW NW section 26-12-3w, digging cellar; same company's No. 1 Foraker, NW SW NW NW section 26-12-3w, cellar; same operators So. 1 Meriposa, SE SW NW NW section 26-12-3w, building rig; No. 2 Meriposa, NE SW NW NW section 26-12-3w, location; same company's No. 1 Shade, SW NW NW NW section 26-12-3w, digging cellar; same operator's No. 1 Sunrise, NW NW NW NW section 26-12-3w, building rig.

Black Gold Refining Co. No. 1 Noll, SE SW SE SW section 15-12-3w, digging cellar; same operator's No. 1 Rose White, C SW SE SW section 15-12-3w, digging cellar; Hall & Briscoe, Inc., No. 1 Marion, C SE SW SE section 22-12-3w, building rig; Superior Oil Co. and others No. 1 Francis, SE SE SW SE section 22-12-3w, building rig.

British-American Oil Co. No. 2 Clark Subdivision, SW NW SW NW section 23-12-3w, location; same operator's No. 3 Clark Subdivision, NW NW SW NW section 23-12-3w, location; same company's No. 3 Hampton, SW NE NW SW section 23-12-3w, location; same operator's No. 2 Gast Heights, NE NE SW NW section 26-12-3w, location; the No. 3 Gast Heights, NW NW SW NW section 26-12-3w, digging cellar; No. 5 Gast Heights, NE SE SW NW section 26-12-3w, cellar; the No. 6 Gast Heights, NE SW SW NW section 26-12-3w, cellar; same operator's No. 1 Summitt, C E half SE NW NW section 26-12-3w, cellar; same company's No. 1 Tuxedo, C SE NW NW section 26-12-3w, building rig.

Anderson-Prichard Oil Co. No. 1 Rall, NE NW SW NW section 26-12-3w, location; Phillips Petroleum Co. No. 1 Lacey Shadwick, C W half SE NW NE section 26-12-3w. cellar.

Pontotoc County

E. H. Moore and associates completed another Wilcox sand producer in the Fitts field of Pontotoc County at No. 9-A Wirick, NE SE SW section 29-2-7. It topped Wilcox sand at 4,450 feet and was bottomed at 4,465 feet. It flowed 542 bbls. of oil in five hours through Hydril. Gas gauged 1,183,000 feet. Its potential rating was 2,374 bbls. Bromide was topped at 3,900 feet; McLish, 4,105 feet; Dense, 4,365 feet. Same operators No. 8 Harper, NE NW NE section 29-2-7, topped Hunton lime, the producing horizon, at 3,469 feet and was completed at total depth of 3,785 feet. It was acidized and flowed 1,200 bbls. of oil in 24 hours, with 1,181,000 feet of gas.

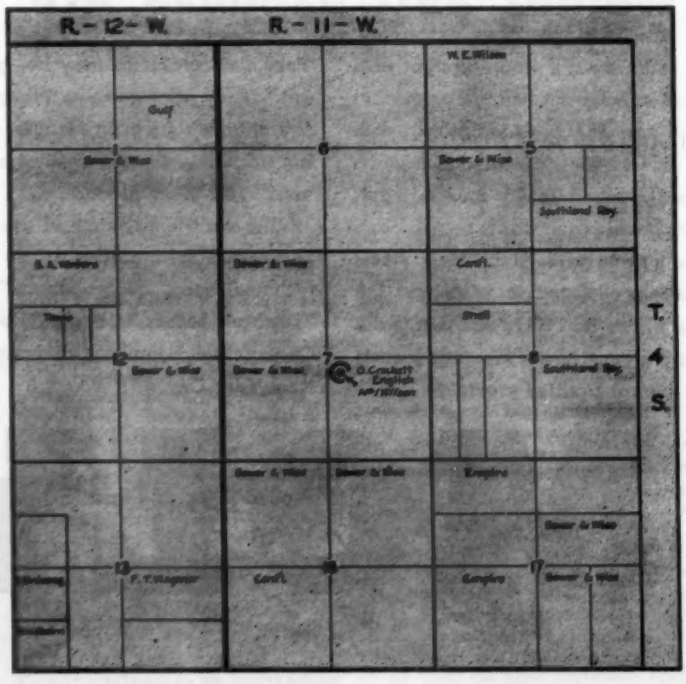
J. E. Crosbie, Inc. No. 3 Burris, SW SE NW section 27-2-7, made potential of 3,664 bbls. of oil and was completed. Top of Bromide was 3,975 feet; McLish, 4,180 feet; total depth, 4,290 feet. After acidizing, it flowed 949 bbls. through casing and tubing in 10 hours. It was reacidized and flowed 733 bbls. through tubing in four hours. Fleetborn Oil Co. No. 2 J. Norris, SW NW NE section 25-2-6, topped Bromide at 4,350 feet; total depth, 4,450 feet. It was acidized and flowed 270 bbls. of oil through tubing in five hours, and made potential of 535 bbls. Same operator's No. 2 G. Smith, NE SE NE section 31-2-7, an old well, was plugged back from 4,423 feet to 4,400 feet. It flowed 336 bbls. through tubing in four hours and was recompleted for old potential.

J. L. Shaw No. 1 Illinois Bankers Life, NW SE NW section 1-4-5, wildcat northwest of Ada, was dry and abandoned at 2,854 feet, total depth. Hunton lime was topped at 2,337 feet; Sylvan, 2,492 feet; Viola, 2,599 feet; Simpson Dolomite, 2,740 feet.

New work in Pontotoc County follows: Fleetborn Oil Corp. No. 8 Woolley, SW NW SW section 27-2-7, building rig; Bishop Oil Co. No. 4 Simpson, NE NW NW section 28-2-7, location; Magnolia Petroleum Co. No. 9 Metropolitan Life, NW NE SW section 27-2-7, building rig; same operator's No. 2 Woolley, NE cor. section 28-2-7, cellar and pits; same operator's No. 9 Simpson, NW NE NE section 29-2-7, cellar and pits; E. H. Moore and others No. 8-A Harper, NE NW NE section 29-2-7, spudded; Clark-Cowden & Delaney No. 2 Brown, SE SE NE section 12-4-7, old well being deepened, drilling at 1,950 feet; Larson & Small Oil Co. No. 1-A Robinson, NW SW SE section 23-5-8, drilling at 782 feet.

Osage County

Carter Oil Co. and others No. 13 Skelly-Ducotey, NW SE SW section 3-25-6, on the community block in the South Burbank field of Osage County, was completed with potential estimated at 5,500 bbls. It topped Bartlesville sand at 2,678 feet and was bottomed at 2,758 feet in sand. It flowed 1,709 bbls. in 7 hours and 15 minutes, averaging 233.05 bbls. an hour. Same operators' No. 2 Mary Mosier, SE SE NW section 34-26-6,



Work has started at English Drilling Co. No. 1 Wilson, wildcat, that will test deep sands in this part of Cotton County, Okla.

(Mid-Continent Map Co., Tulsa, Okla.)

topped sand at 2,840 feet and drilled to 2,918 feet, total depth. It flowed 67 bbls. of oil in 24 hours through tubing and was completed.

Tide Water Oil Co. No. 1 Osage, SW SE NE section 9-24-7, had top of Bartlesville sand at 2,547 feet; total depth, 2,620 feet. It flowed 739 bbls. of oil in the first 24 hours and was completed. Lewis Production Co. and Texas Co. No. 6 Osage, NE SE SE section 17-24-7, was shot with 30 quarts at 2,620-35 feet, flowed and swabbed 259 bbls. of oil in 24 hours and was completed. Top of Bartlesville sand was 2,609 feet; total depth, 2,635 feet. Lewis Production Co. No. 14 Osage, SW NW NW section 21-24-7, flowed 220 bbls. of oil after a shot at 2,643-63 feet and was completed at 2,665 feet, total depth. Production was estimated at 308 bbls. daily. Top of Bartlesville sand at 2,632 feet. I. Nadel No. 4 Osage, SE SW SE section 18-22-11, an old well deepened from 1,676 to 1,826 feet, failed to increase production, pumping 3 bbls. of oil per day from original pay horizon. Murray Ringold No. 9 Osage, SE NW NE section 25-21-8, was dry and abandoned at 1,130 feet, total depth. Hogshooter horizon was topped at 1,025 feet; Layton, 1,095 feet. Mullendore Trust Co. No. 1 Mullendore, SW SE SW section 32-22-8, topped Bartlesville sand at 2,263 feet; had a hole full of water at 2,325-30 feet, total depth, and was dry and abandoned.

New work in Osage County was as follows: Lewis Production Co. No. 4 Whitehorn, NW NW SW section 10-24-7, cellar; Lewis Production Co. and Texas Co. No. 1 Parker, SW SW NW, section 10-24-7, building rig: Tide Water Oil Co. No. 3 Graves, SE SE NE section 9-24-7, moving in material; same operator's No. 4 Graves, NE SE NE section 9-24-7, moving in material; same operator's No. 5 Graves, NW SE NE section 9-24-7, location; company's No. 6 Graves, NE SW NE section 9-24-7, location; Phillips Petroleum Co. No. 1 Osage, SE SE NW section 9-24-7, location; Lewis Production Co. and Continental Oil Co. No. 9 Ah-Kah-Me, NE NE SE section 9-24-7, building rig; Coralena Oil Co. No. 11 Carroll, SE NE SW section 15-25-6, rigging up rotary; Carter Oil Co. No. 6 Oliphant, SW NE SE section 10-25-6, rig on grounds; Bay Oil Corp. No. 1 Mohler, SW SW NE section 23-26-6, location; Pueblo Oil Co. No. 1 Osage, NE NW NW section 14-21-8, old well rigging up to deepen.

Kay County

Work had started at one new test in Kay County. Kansas-Oklahoma Gas Co. No. 1-A Rinehart, C SE NW section 21-29-1, set 8-inch casing at 520 feet and was drilling at 640 feet.

Payne County

Twin State Oil Co. No. 2 Morris, NE NE SW section 5-19-5, was the only new test reported in Payne County. It topped Avant formation at 1,840 feet; Layton, 2,225 feet; Oswego, 2,805 feet, and was drilling at 3,115 feet.

Pawnee County

Considerable new activity is getting under way in Pawnee County, including deepening of old wells. Jack Phillips No. 2 Eldridge, C W half SW SE section 7-20-9, was dry in the upper Layton at 1,210-43 feet; but pumped 19 bbls. of oil in nine and one-half hours from lower Layton at 1,251-61 feet, total depth, and was testing. It is in the Keystone district.

Other new work was as follows: J. R. Reynolds No. 1-A Downing, NW NW SE section 24-20-8, drilling at 1,000 feet; O. H. West No. 2 Walls, NE cor. section 5-20-8, drilling at 900 feet; S. C. Williams, NW NW NE section 2-20-8, old well drilling deeper, fishing at 2,365 feet; Privett Drilling Co. No. 3 Cline, SW NW SE section 10-20-6, drilling at 420 feet; J. B. Grieves No. 5 Anglin, C W half SE NW section 31-21-8, old well plugging back from 3,123 feet to 2,835 feet.

Johnson Oil Refining Co. No. 1-A Skully, NE NW NE section 25-21-7, in the Cleveland area of Pawnee County, an old well, was deepened from 2,757 feet to 2,784 feet. It was acidized, flowed 35 bbls. the first day, completed.

Estimated Production

Estimated daily average production of Oklahoma for the week ending April 25 and for the preceding week is as follows:

	Barrels	
	April 25	April 18
Allen	7,675	7,900
Asher-West Asher	875	850
Burbank	7,650	7,300
South Burbank	14,750	14,500
Balance Osage	23,750	23,350
Blackwell district	4,500	4,400
Bristow-Slick	8,500	8,125
Chandler	4,125	3,825
Crescent	5,350	5,250
Cromwell	3,750	3,600
Cushing-Shamrock	11,600	11,400
Duncan district	4,050	3,900
Edmond	12,950	12,925
Fish	10,575	10,900
Fitts	51,325	52,600
Gray	1,700	1,600
Graham	4,200	5,125
Healdton	9,175	8,850
Hewitt	4,500	4,425
Holdenville	1,075	1,100
Keokuk	5,075	7,200
Konawa	1,625	1,850
Lucien	13,225	12,675
Marshall-Lovell	975	1,000
Oklahoma City	149,300	162,600
Olympic	6,200	5,700
Papoose	1,075	1,050
Polo	3,750	3,725
Sasakwa and townsite	3,475	3,300
Sholem-Alechem	3,700	3,575
Seminole field:		
Bowlegs	14,175	14,225
Carr City	7,175	7,325
Earlsboro	7,700	7,575
South Earlsboro	1,000	1,000
East Earlsboro	11,100	11,150
Little River	13,000	13,275
East Little River	1,125	1,075
Maud	975	975
Mission	2,550	2,475
Seminole	11,425	11,550
East Seminole	2,550	1,950
Searight	6,225	6,425
Total Seminole	79,000	79,000
St. Louis-Pearson	25,900	24,650
Tatums	3,500	3,500
Tonkawa-Garber-Thomas	5,600	5,700
Wewoka	3,775	3,775
Yale-Jennings	4,100	4,075
Other pools	54,750	54,500
Total Oklahoma	557,100	569,700

Carter County

Shell Petroleum Corp. No. 64 Wirt Franklin, NW SW NE section 8-4s-3w, in the Healdton field of Carter County, pumped 70 bbls. of oil in 24 hours and was completed. It had a series of oil sands from 954 to 1,030 feet, and was bottomed at 1,031 feet in lime. Carter Oil Co. No. 12 Roy Johnson, C N half NW NW section 5-4s-3w, had sand at 940 to 1,043 feet, total depth, pumped 10 bbls. of oil in 24 hours and was completed.

New tests in Carter County: D. A. Upham No. 2 Hooks, SW NW SW section 14-1s-3w, machine; Samedan Oil Co. No. 1 Akers, NW SW SW section 4-2s-2w, moving in material; same operator's No. 2 Akers, NE SE SE section 5-2s-2w, location; Louis Sikes, Inc. No. 2 Byrd, SE SE SE section 5-2s-2w, building rig; Samedan Oil Co. No. 1 Fitzgerald, NE NE NE section 8-2s-3w, location; Cox-Harmon No. 1 Wilson, NE NW NW section 9-2s-2w, moving in material;

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Simpson-Fell Oil Co. No. 1 Davis, NW cor. section 9-2s-2w, drilling at 600 feet; Bull Head Oil Co. No. 22 Daney, NW SW SW section 4-4s-3w, rigging up machine; Shell Oil Corp. No. 66 Wirt Franklin, SE SE NE section 8-4s-3w, drilling at 300 feet; same operator's No. 67 Wirt Franklin, SE SW NE section 8-4s-3w, drilling at 150 feet.

Marshall County

Norman Smith No. 1 Chestnut, NE cor. section 23-8s-5, wildcat in Marshall County, was dry and abandoned at 558 feet, total depth. G. M. Felts No. 5 fee, NE SW NW section 6-8s-6e, had water sand at 518-20 feet, total depth, and was dry and abandoned.

Stephens County

Mudge Oil Co. No. 3 Anderson, SE SW SW section 10-3s-5w, in the Loco area of Stephens County, had sand at 1,443 to 1,453 feet, total depth, flowed 25 bbls. of oil in 24 hours and was completed. Gas measured 2,000,000 feet. Raisen Brothers No. 4 Lewis, SE NE SE NW section 7-2s-4w, produced 2 bbls. of oil in 24 hours and was completed at 414 feet, total depth. It had sand at 396-413 feet. Same operators' No. 5 Lewis, NE SE NW section 7-2s-4w, pumped 2 bbls. of oil a day and was completed in sand at 183 to 205 feet, total depth. Same operators' No. 3 Lewis, south of No. 4 Lewis in the same section, was dry and abandoned at 912 feet, total depth.

New work in Stephens County: Raisen Brothers No. 6 Lewis, SW NE SE NW section 7-2s-4w, had sand at 431-46 feet, total depth, and was rigging up to pump; same operators' No. 7 Lewis, NE NW SW NW section 7-2s-4w, had gas sand at 426-42 feet, total depth, and was shut down for orders. T. H. McCasland No. 1 J. C. Parker, NE NE SW section 2-1n-6w, wildcat, was moving in material.

Jackson County

Gulf Oil Corp. No. 2 Byrd, SE SW NW section 14-1-20w, in the Altus area of Jackson County, had granite wash at 1,506-14 feet, and was dry and abandoned at 1,544 feet, total depth, in brown shale.

Two new tests in Jackson County were reported. Gulf Oil Corp. No. 3 Eley, NE NW SE section 10-1-20w, was building rig. John Dickson and others No. 1 W. B. Wright, NE NW SE section 19-1-19w, was a location for a wildcat.

Jefferson County

Lang-Yingling & Lauck No. 15 Seay, SE SW SE section 3-7s-5w, in southern Jefferson County, had a series of sands from 1,209 feet to 1,276 feet, total depth, pumped 35 bbls. of oil in 24 hours and was completed.

The only new Jefferson County test was Lang-Yingling & Lauck No. 17 Seay, SE SW SE section 3-7s-5w, twin well to No. 15 Seay, drilling at 1,050 feet.

Pottawatomie County

Gulf Oil Corp. No. 1 Bois-Clark, SW SE SE section 21-6-4, wildcat east of Asher, in southern Pottawatomie County, was dry and abandoned at 3,835 feet, total depth. Hunton lime was topped at 3,425 feet; Sylvan, 3,555 feet; Viola, 3,656 feet; Dense, 3,710 feet; Dolomite, 3,760 feet. Mohawk Oil Co. No. 1 Lippert, NE cor. section 35-6-4, in the Gray area, was dry and abandoned at 3,020 feet, total depth.

New work in Pottawatomie County follows: Amerada Petroleum Corp. and others No. 1 Simpson, NE cor. section 9-10-5, building rig; Magnolia Petroleum Co. No. 2 Disch, SE cor. section 12-7-4, old well, rigging up standard tools to deepen; Sinclair Prairie Oil Co. and Slick-Urschel Oil Co. No. 2 Walters, SW SE SE section 12-7-4, building rig; Magnolia Petroleum Co. No. 6 Brandenburg, NW cor. section 18-7-5, old well being deepened, drilling at 3,970 feet.

Hughes County

Three more Senora sand producers were completed in the Olympic pool of Hughes County. Mid-Continent Petroleum Corp. No. 4 Hampton, SW NW NE section 1-9-8, topped Senora sand at 1,680 feet and was bottomed at 1,721 feet. After a shot with 60 quarts, it flowed 486 bbls. of oil in 12 hours through casing and was completed. George Manahan and others No. 1 Oliphant "E," SE SE NW section 1-9-8, was shot with 60 quarts, flowed 462 bbls. in 24 hours through casing and was completed. It topped Senora sand at 1,658 feet. Total depth was 1,732 feet. Carter Oil Co. No. 2 Hampton, NW NE NE section 1-9-8, topped Senora sand at 1,698 feet; total depth, 1,746 feet. It was shot with 65 quarts, flowed 120 bbls. in 14 hours and was completed.

New work in Hughes County: Minnehoma Oil & Gas Co. No. 2 Brown, SE NE NE section 17-7-8, old well drilling deeper from 2,922 feet, cleaning out 10 feet off bottom; Texas Co. No. 2 Keaton, C SW SW section 4-8-10, location; Sinclair Prairie Oil Co. No. 10 Oliphant, NE NE SE section 1-9-8, waiting on cement at 1,694 feet, total depth; Mid-Continent Petroleum Co. No. 8 Hampton, NW NW NE section 1-9-8, cellar; George Manahan and others No. 4 Oliphant "E," NW SE NW section 1-9-8, set 10-inch casing at 60 feet and waiting on cement.

Okfuskee County

George Manahan and others No. 3 Dalton, SE SW SE section 36-10-8, in the Okfuskee County extension of the Olympic area, flowed 300 bbls. of oil in 16 hours through casing after a shot with 50 quarts and was completed. It topped Senora sand at 1,710 feet; total depth, 1,738 feet.

The following new work was started in Okfuskee County: Sinclair Prairie Oil Co. No. 1 Carolina, SW NW SW section 31-10-9, building rig; Arrow Drilling Co. and others No. 1-A Sango, C SW SE section 20-10-9, location; Manahan & Grisson No. 5 Dalton, NE SE SE section 36-10-8, cellar; Carter Oil Co. No. 1 Gray, C SE SE section 11-11-8, digging cellar.

Cotton County

Work has started at a test in Cotton County that will be closely watched because of the information it will give on that sector of southwestern Oklahoma, now very much in the spotlight. It is the English Drilling Co. No. 1 Wilson, NW NW SE section 7-4s-11w, which has spudded. The contract calls for 4,000 feet, or an Arbuckle lime test, to insure a complete test of all producing horizons in that district. The block on which the test is located was assembled by L. D. Wise and C. G. Bower of Lawton. It was geologized by Mr. Wise. Production will be sought in the lower Cisco series and in the upper strata of the Ordovician, which previously have not been tested in that district. This is the first of several tests proposed for Cotton County this year. Considerable leasing is under way in the county, and numerous oil and gas leases have been filed at Walters, the county seat, recently. Bower & Wise, J. B. Russell and Gulf Oil Corp. have been among the most active in assembling acreage in the county. The Gulf company purchased some Cotton County acreage at the Indian lease sale at the Kiowa Agency in Anadarko several days ago.

Seminole County

Carter Oil Co. and Magnolia Petroleum Co. No. 4 Tom Scott, C E half NE SW section 11-10-6, in the South Keokuk area of Seminole County, flowed 406 bbls. of oil in 14 hours through casing and was completed at 4,150 feet, total depth. It was producing from Misener sand, topped at 4,124 feet, and Hunton lime, topped at 4,138 feet. J. D. Campbell No. 2 Knappenberger, NE NW NE section 17-9-7, toped Cromwell sand at 3,419 feet, drilled to 3,422 feet, total depth, and on potential test flowed 354 bbls. of oil in 24 hours through tubing. Gas was estimated at 500,000 feet. Southern Oil Co. and Eason Oil Co. No. 1 Harjo, NW SW SE section 11-6-6, an old well, was deepened from 2,454 feet to 2,830 feet, and was dry and abandoned with salt water in the hole.

The following new operations were reported in Seminole County: W. B. Pine No. 3 Cheparney, NE NE SW section 12-5-7, rigging up rotary; Francis Oil Co. No. 3 Hall, NW SE SW section 19-5-6, set 10-inch casing at 70 feet and waiting on cement; Irvin Wilson and Reynolds Drilling Co. No. 1 Casey, SW NE NE section 25-6-7, building rig; Texas Co. No. 4 Steward, NE SW NE section 19-9-7, location; Vierson & Hayes Drilling Co. No. 1-A Fixico, C NW NE section 26-9-6, cellar and pits; Carter Oil Co. No. 1 Brock, C E half SE NE section 15-10-6, rig; Amerada Petroleum Corp. and others No. 1 Wyant Community, NW SW SE section 3-10-5, rig; Carter Oil Co. and others No. 1 Wilson, C N half SW NE section 35-11-6, building rig.

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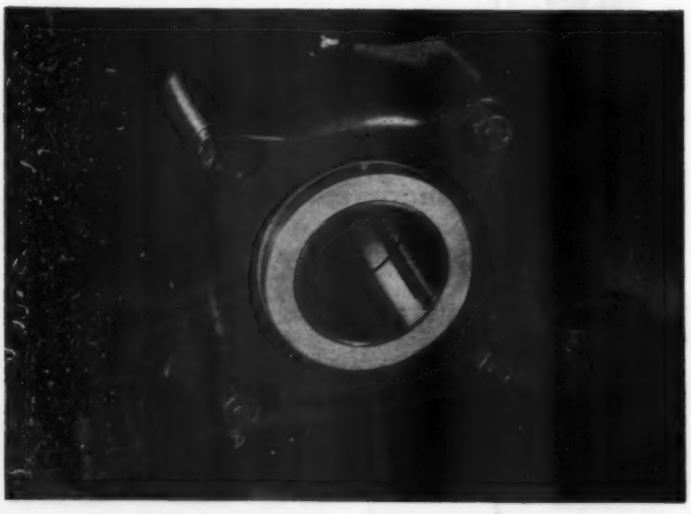

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West and North Texas

LARGEST COMPLETION LIST IN FIVE YEARS IS REPORTED

By
L. E. BREDBERG

FORT WORTH, Tex., Apr. 26.—West Texas again showed its importance when 41 tests were completed, all but six wildcats. This is the largest number completed in that district within five and one-half years, drilling having gradually increased during the past year and a half, with from 30 to 40 locations staked each week. This week there were 37 locations, three for wildcats or semiwildcats.

Winkler and Jones County reported the greatest number of completions, 10 tests, four dry, being completed in Winkler and eight in Jones County.

An extreme wildcat was staked in the southwest corner of Andrews County by the Grisham-Hunter Corp. in the NW quarter of section 24, Block 73, P.S.L. Survey, about 5 miles northwest of production, a small producer in Section 10, Block 45, northeast corner of Ector County. The location is about midway between the Fuhrman pool, northeast in Andrews County, and the Keystone pool, southwest in Winkler County, about 14 miles from each. It may prove a new trend from the northeast corner of Ector to the northwest. It may be carried to the Ordovician.

Extension Wells

Two important extensions were registered on a 1½-mile northwest extension to the Means pool in northeast Andrews County and one a mile extension to the Cowden field in northern Ector County. The former was drilled by Humble Oil & Refining Co. in the SE quarter of section 13, Block A-20, P.S.L. Survey. It was bottomed at 4,550 feet and shot with 420 quarts from 4,440-4,450 feet and flowed 197 bbls. the first 24 hours. It is to be acidized. It is expected to prove 1,500 or 2,000 more acres.

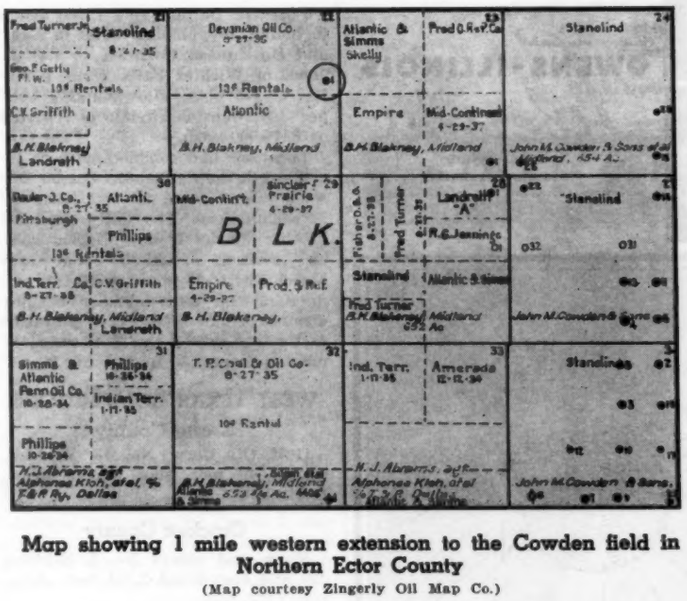
The western extension to the Cowden field, in Ector County, was brought in by the Devonian Oil Co. in the NE quarter of section 22, Block 43, Township 1n, T.&P. Survey, about 1 mile west of production. It is on the B. H. Blankney ranch. The lime pay was topped at 4,194 feet, the hole bottomed at 4,204 feet, where it started flowing around 5 bbls. per hour before shutting in to erect storage. It will be carried deeper.

Sun Oil Co. No. 1 Holt, 2½ miles northwest of the main Cowden field in northern Ector County, deepened from 4,350 feet, where it produced only 20 bbls., struck sulfur water at 4,971 feet and plugged back to shoot the upper horizons. It is in the SE quarter of Section 5, Block 43, Township 1n, T.&P. Survey.

Another Ordovician Test

Gulf Oil Corp. is drilling on its second deep try in the Tubbs or Sand Hills pool in western Crane County. No. 2 Waddell and others, section 18, Block B-21, P.S.L. Survey, about 1½ miles northeast of its deep discovery in the NW corner of section 4, is believed to be higher on structure. The discovery was completed for a 123-bbl. per day pumper from pay topped at 5,979 feet. This test was drilled to 6,450 feet, but after striking sulfur water was plugged back to 6,317 feet to shoot and complete. It is the first Ordovician discovery in the Permian Basin since the Big Lake field in Reagan County in 1929.

Loffland Brothers, who drilled a Permian lime test in the NW corner of section 9, Block B-27, in the Tubbs pool, about 2½ miles southeast of the Ordovician discovery, have a derrick for another test in this same section.



Map showing 1 mile western extension to the Cowden field in Northern Ector County

(Map courtesy Zingerly Oil Map Co.)

Concho Try

Maverick Oil Co. No. 1 Jim Rice, in section 18, I.N.R.R. Survey, in eastern Concho County, which showed for a shallow producer in February from sand logged around 1,850 feet, but which was drilled deeper in quest of production in the Ellenberger, member of the Ordovician, was given a 15-quart shot from 1,828-47 feet this week in a try to make a producer from the higher sand streak. The shot increased the gas to around 350,000 feet per day, but the outcome is doubtful. It made the best showing of oil yet struck in the county, heading when the test was swabbed.

Completion of Yoakum Discovery

The Yoakum discovery of Cascade (C. J. Davidson) and Honolulu Oil Corp., in section 678, John H. Gibson Survey, on the Bennett ranch, southeast corner of the county, has been completed for a 234-bbl. well. It was plugged back from total depth of 6,278 feet to 5,264 feet after striking sulfur water, was acidized with 2,000 gallons and shot with 340 quarts from 5,080-5,257 feet and struck the first gas pay at 5,085 feet. Oil pay streaks were logged at 5,090-96 feet, 5,188-95, 5,215-30, 5,243-48 and 5,253-60 feet. Elevation is 2,557 feet. This is the first production in the county and opens a large area.

Apparent Extension

Illinois Oil Co. No. 1 Farmers and Merchants Bank of Abilene, SE SW section 23, Block 26, P.S.L. Survey, nearly 1 mile northwest of the nearest producer, an extension to the Kermit or Brown & Altman area of Winkler County, looks like another western extension. It logged pay at 2,911-13 feet, picking up an increase from 2,941-45 feet, making 2 bbls. per hour and gauging over 3,000,000 feet of gas. It is drilling below 3,010 feet. The Sayre-Howe pool's nearest production is about 1½ miles north, but this pool and the Kermit pool seem likly to be linked.

Hawley Definition

The west side of the Hawley pool in Jones County was defined when Martin & Sons No. 1 Triplett, 300 feet from the south and east lines of the G. Martinez Survey, one-quarter mile west of production, was abandoned at a total depth of 2,360 feet.

Two wildcats in the county were also abandoned. Fondren Production Co. gave up No. 1 Cox and Manley, in the F. Sieberman Survey, No. 8, at a total depth of 2,012 feet and Bob Elmore of Fort Worth, abandoned No. 1 Caton in section 10, D.D.&A. Survey, 3 miles west of Avoca. Total depth was 2,215 feet. Shaheen No. 1 McCoy was also temporarily abandoned at 380 feet. It is in section 1, Block 16, T.&P. Survey.

The northwestern Crockett County wildcat of Mann, Wahlenmaier and others on the Robbins ranch, section 2, Block B, G.C.&S.F. Survey, has been abandoned at a total depth of 2,165 feet. Elevation is 2,655 feet. It was trying for production found in the recently opened pool southeast of the McCamey-Hurdle producing area.

Greencliff Oil Corp. and others have abandoned their Upton County wildcat at 4,373 feet, plugging back to 4,185 feet before giving it up. It is in section 58, Block B, T.C. Survey, northwest of Rankin.

Wichita Falls District

B. H. Hilburn of Wichita Falls has spudded a wildcat about 3 miles north of Lindsey and 6 miles northwest of Gainesville, on V. M. Hugon farm, in the A. Myers Survey, in Cooke County, and is to drill to 2,500 feet. Another wildcat is to be drilled by Honorado Oil Co. on the H. Fields farm in the J. B. McClyman Survey, in the northwest part of the county and southeast of the Bulcher pool.

P. A. Shaner and others are rigging up rotary for a 3,500-foot test on the W. M. Blair tract in the R. H. Deever Survey, for a deep test for Cooke County.

Throckmorton County registered a setback when Falls Production Co. No. 19 M. K. Graham, a wildcat in section 985, T.E.L. Survey, was abandoned as dry at 4,680 feet, one of the deepest tests drilled in this county, Humble Oil & Refining Co. recently abandoning a similar deep test.

Texas Co. has staked location for a 4,000-foot wildcat in section 1,985, T.E.L. Survey, about 2 miles northeast of production in the Knox pool in section 3,412 in Young County.

Shackelford Wildcat

Sandefer and Thompson, operators of Breckenridge, have staked location for a wildcat on the J. M. Alexander ranch in section 2, Block 14, T.&P. Survey, about 20 miles southwest of Albany, to try for production in the Bluff Creek and lower sands.

White and Duncan of Wichita Falls have staked a wildcat for Shackelford County, on the G. R. Davis ranch about 7 miles southeast of Lueders and northeast of the Davis pool. It is in the NW quarter of section 21, E.T.R.R. Survey.

Big Well in Young County

The second largest well ever completed in Young County, and one of the largest completed in the North Central Texas district, was brought

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in on lands owned by Sneddon and Deats, in the Holly Survey, a little over a half mile south and west of production in the Rathke pool and 3 miles north and east of South Bend, in Young County. The well logged a sand at 3,960 feet and came in with an estimated potential of 8,000 bbls. per day, making around 25,000,000 feet of gas. Nash and Windfohr No. 1 McCloud, same county, was completed in 1930 as the largest well drilled in Young County, was rated at around 25,000 bbls. a day.

Panhandle District

Another wildcat drilled in the Kirkland area has proved a failure. Alma Oil Co. No. 1 Yarbrough, section 546, Block H, W.&N.W. Survey, northeast Cottle County, was given up at total depth of 6,002 feet. It had showings of oil at 2,470-80 and from 2,750-55 feet, with a deeper one at 4,208 feet, all noncommercial. This is the second deep test, the company abandoning one across the line in southeast Childress County several months ago although it bailed considerable oil.

A third test is proposed about 4 miles south of No. 1 Yarbrough in Cottle County.

Sale

Pure Oil Co. has sold three leases including 16 pumping wells in Gray and Hutchinson Counties, to Roy B. Jones of Wichita Falls. Daily potential is 275 bbls., allowable 150 bbls. per day. Consideration was reported as $110,000 cash.

Locations and completions both increased in the Panhandle district this week. There were 15 locations and 16 completions. The daily potential of this district is now 678,350 bbls., an increase of 31,350 bbls. over March, with 56 more wells in production, the total number of producers being 2,708. The proration factor was cut by the Railroad Commission from 2.36 to 2.07 for May.

WEST TEXAS COMPLETIONS

Crane County

Gulf Oil Corp. No. 13 Waddell, 3,520-3,540 feet, shot and acidized, 10,513 bbls.

Crockett County

Mann and others No. 1 Robbins, dry and abandoned 2,165 feet, elevation 2,655 feet.

Ector County

Farley No. 2-B Connell, 3,526-3,715 feet, shot, 140 bbls. Barnsdall Oil Co. No. 1 Foster, 4,080-4,237 feet, shot, 165 bbls.

Jones County

Martin & Sons No. 2-C Dorsey, 2,212-2,218 feet, 651 bbls.; No. 1 Triplett, dry and abandoned 2,360 feet. Humphrey No. 7 Dorsey, 2,207-2,219 feet, 700 bbls.; No. 9 Dorsey, 1,999-2,007 feet, 66 bbls.; No. 10 Dorsey, 2,205-2,214 feet, 658 bbls. Ungren & Frazier No. 4 Jennings, 1,934-1,943 feet, 277 bbls. Sandy Ridge Oil Co. No. 4 Jones, 1,947-1,984 feet, shot, 108 bbls. Elmore No. 1 Caton, dry and abandoned 2,215 feet. Shaheen No. 1 McCoy, temporarily abandoned 380 feet. Fondren Production Co. No. 1 Cox & Manley, dry and abandoned 2,012 feet.

Howard County

Magnolia Petroleum Co. No. 7 Chalk, 2,895-3,030 feet, shot, 25 bbls. Continental Oil Co. No. 7 Eason, 2,424 feet, acidized, 1,163 bbls. Humble Oil & Refining Co. No. 14 Settles, 2,392-2,451 feet, acidized, 569 bbls.

Loving County

Lockhart No. 3 State, dry and abandoned 4,444 feet.

Pecos County

Aero Gas & Refining Co. No. 3 Gregg, 1,205-1,475 feet, 40 bbls. Whiteside No. 1 Fromme, total depth 1,478 feet, plugged back to 1,405 feet, 10 bbls. Marathon Oil Co. No. 46-A Yates, 1,570-1,670 feet, 455 bbls. per hour.

Upton County

Texas Pacific Coal & Oil Co. No. 10-C Lane, 2,240-2,306 feet, 345 bbls.; No. 11-C Lane, 2,240-2,352 feet, acidized, 673 bbls. Shell Petroleum Corp. No. 3-A Cordova Union Land Co., 2,285-2,310 feet, acidized, 115 bbls., 2 per cent water and b.s. Hope petroleum Co. No. 4 Lane, 2,265-2,292 feet, 248 bbls. Greencliff Oil Corp. and others No. 1 Tippett, dry and abandoned 4,373 feet, plugged back to 4,185 feet.

Ward County

Stanolind Oil & Gas Co. No. 1 Cunningham, 2,444-2,503 feet, shot, 228 bbls. through three-quarters inch tubing choke. Sinclair Prairie Oil Co. No. 1 Carnegie, 2,214-2,350 feet, shot, 160 bbls. Wahlenmaier No. 3 Potts, 2,233-2,390 feet, shot, 408 bbls. Texas & Pacific Coal & Oil Co. No. 4 Barker, 2,252-2,405 feet, shot, 541 bbls.; No. 13 James, 2,340-2,540 feet, shot, 857 bbls.

Yoakum County

Discovery well. Cascade Petroleum Corp. (C. J. Davidson) and Honolulu Oil Corp. No. 1 Bennett, gas pay 5,085 feet, oil pays 5,090-96, 5,188-95, 5,215-30, 5,243-48, 5,253-60 feet; total depth 5,278 feet. Plugged back to 5,264 feet. Acidized 2,000 gallons and shot with 340 quarts from 5,080-5,257 feet. Elevation 2,557 feet. 234 bbls. per day.

Winkler County

Magnolia Petroleum Co. No. 18 Walton, 2,821-2,935 feet, shot, 835 bbls. Magnolia Petroleum Co. No. 20 Walton, 2,811-2,930 feet, shot, 568 bbls. Maxwell and others No. 8 Daugherty, 2,810-3,070 feet, shot, 504

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bbls. Mid-Continent Petroleum Co. No. 8-B Howe, 2,800-2,970 feet, shot, 801 bbls. Skelly Oil Co. No. 8 Halley, 2,772-2,889 feet, shot 208 bbls. Atlantic Oil Producing Co. No. 5-J Hendrick, 2,800-3,030 feet, shot, 1,003 bbls. Gulf Oil Corp. No. 1-A Daugherty, 2,925-3,414 feet, plugged back to 3,008 feet, 25 bbls. Humble Oil & Refining Co. No. 1 Colby, 2,774-2,980 feet, shot, 1,002 bbls.

NORTH TEXAS COMPLETIONS

Archer County

L. T. Burns No. 1 S. M. J. Benson B, 1,030 feet, dry. C. B. Christie and others No. 3 L. F. Wilson, 1,608-1,612 feet, 70 bbls. Continental Oil Co. No. 7 C. H. Zanecetti, 1,852 feet, dry. Fain McGaha No. 5 L. F. Wilson F, 1,608-1,614 feet, 35 bbls. Hamilton Petroleum Co. No. 34 Abercrombie 1,166-1,176 feet, 85 bbls.; No. 35 Abercrombie 1,149-1,157 feet, 80 bbls.; No. 13 A. J. Ikard A, 1,208 feet, dry. C. B. Long No. 8 J. H. Turbeville, 1,297-1,300 feet, 20 bbls. Texas Co. No. 1 J. H. Turbeville I, 2,850 feet, dry. Wilson-Ligon, Inc., No. 3 J. W. Powell, 2,728-2,752 feet, 30 bbls.

Baylor County

Consolidated Oil Co. No. 1 W. H. Portwood Z, 1,361-1,363 feet, 285 bbls., wildcat.

Clay County

Flynn Brothers No. 1 J. Berry, 792-806 feet, 20 bbls.

Cooke County

Anderson & Kerr No. 1 F. A. Bruhlmeyer, 2,009-2,014 feet, flowing 350 bbls., wildcat. Hester Oil Co. No. 3 Trew A, 1,505-1,512 feet, 125 bbls. Hudspeth and others No. 3 Trubenbach B, 930-936½ feet, 80 bbls. F. W. Merrick, Inc., No. 3 Andress, 1,133-1,150 feet, 50,000 feet gas; No. 10 J. W. Hess, 830-840 feet, 5 bbls.; No. 28 A. Knabe, 796-812 feet, 10 bbls. Mudge Oil Co. of Texas No. 12 Johnson, 1,040-1,082 feet, 35 bbls.; No. 5 R. W. Trew, 1,064-1,079 feet, 1,000,000 feet gas. F. Potts No. 1 S. D. Meador, 2,016 feet, dry. Texas Co. No. 1 F. J. Truebenbach, 928-932 feet, 27 bbls.

Jack County

E. C. Lawson and others No. 1 Patterson, 2,950-3,044 feet, 100 bbls. Lewis Production Co. No. 1 S. J. Beasley, 2,950-3,009 feet, 8,000,000 feet gas; No. 2 S. J. Beasley, 2,975-3,035 feet, 1,500,000 feet gas; No. 1 Birdwell, 2,978-3,059 feet, 1,000,000 feet gas.

Montague County

J. F. Hart No. 1 Talley, 1,743 feet, junked. L. C. Heydrick No. 1 J. B. Lawrence, 2,625 feet, dry. Perkins & Cullum No. 7 N. J. Howard, 1,326-1,371½ feet, 22 bbls.

Wichita County

Continental Oil Co. No. 4 W. T. Waggoner F, 1,827 feet, dry. Tom B. Medders No. 1 A. F. Fassett, 1,804 feet, dry. H. L. Rugeley No. 8 Waggoner A, 1,571-1,599 feet, 101 bbls. Texas Co. No. 425 Waggoner A, 1,108-11 feet, 15 bbls.

Wilbarger County

Daniel Drilling Co. No. 7 Waggoner Boggy, 1,872-95 feet, 15 bbls. Waggoner Refining Co. No. 1 Waggoner BB, 2,390-97 feet, 40 bbls.

Young County

S. S. Alexander and others No. 5 Howard, 897-912 feet, 175 bbls. Atchley and others No. 2 Benson, 898-907 feet, 81 bbls. Cato Oil Co. No. 10 Hamilton, 887-920 feet, 50 bbls. Duncan Holt and others No. 8 Benson A, 906-918 feet, 375 bbls. Gorsuch Oil Co. No. 19 Mathews, 725-735 feet, 10 bbls. J. J. Moran and others No. 8 Howard, 902-918 feet, 255 bbls. Sams & Kubecka No. 1 F. M. Cullers A, 690 feet, dry. T. G. Shaw No. 13 Marshall, 881-897 feet, 3 bbls. Solo Oil Co. No. 1 Hausler A, 1,049-1,060 feet, 75 bbls. A. T. Strong No. 1 Manley, 3,333 feet, dry. Underwood & Campbell No. 3 Campbell E, 852-875 feet, 160 bbls. C. V. Welch No. 4 R. J. McCloud, 885 feet, dry. Falls Production Co. No. 1 Jeffery and others, 3,960-3,965 feet, flowing 2,600 bbls. Sinclair Prairie No. 10 Moren, 2,508-2,551 feet, 30 bbls.

Throckmorton County

Falls Production Co. No. 9 Graham, 4,680 feet, dry.

PANHANDLE COMPLETIONS

Carson County

Empire Gas & Fuel Co. No. 2-D Magnolia fee, 2,932-3,031 feet, 716 bbls. pumping, shot with 480 quarts. Hagy-Harrington and March No. 1 Cobb, 2,555-2,676 feet, 40,000,000 feet of gas.

Gray County

Alma Oil Co. No. 1 O. R. Kritzmaier, 3,256-3,302 feet, 461 bbls. pumping, shot with 200 quarts. British-American Oil Co. No. 7 Smith, 3,178-3,232 feet, 822 bbls. pumping, shot with 550 quarts. Magnolia Petroleum Co. No. 1 E. E. Barrett, 3,200-3,245 feet, plugged back to 3,233 feet, 132 bbls. pumping. Stanolind Oil & Gas Co. No. 8-B Cobb, 3,255-3,343 feet, 504 bbls. pumping, shot with 515 quarts. Texas Co. No. 3 Archer, 3,264-3,285 feet, 2,125 bbls.; No. 4-B Chapman, 2,646-2,698 feet, 330 bbls.; No. 10 M. B. Davis, 2,745-2,776 feet, 533 bbls.

Hutchinson County

G. N. McDaniel No. 1 Hodges, 3,020-3,080 feet, 107 bbls. of oil and 37 bbls. of water pumping, shot with 460 quarts. Harry Steckoll No. 4-H Whittenberg, 2,892-2,933 feet, 439 bbls. pumping, shot with 200 quarts. Texas Co. No. 4 J. W. Moore, 3,120-3,148 feet, 530 bbls. pumping, shot with 380 quarts. Turman Oil Co. and Plains Oil Co. No. 4 Watkins, 2,980-3,020 feet, 242 bbls. pumping, shot with 380 quarts. Turman Oil Co. and others No. 5 Whittenberg, 2,901-2,960 feet, 692 bbls. pumping, shot with 380 quarts.

Moore County

Anderson and Kerr No. 1 J. J. Creed, 3,060-3,462 feet, plugged back to 3,290 feet, 15,126,000 feet of gas, shot with 260 quarts. Sunray Oil & Gas Co. No. 1 C. R. Jones "B," 2,874-3,510 feet, plugged back to 3,310 feet, 61,203,000 feet of gas. Texoma Natural Gas Co. No. 1-P J. T. Sneed estate, 2,640-2,979 feet, 61,804,000 feet of gas; No. 8-SN Sneed, 2,474-3,183 feet, 24,035,000 feet of gas.

Wheeler County

Alma Oil Co. No. 2 Perkins, 2,505-2,515 feet, 732 bbls. flowing. Champlin Refining Co. No. 1 Binkley, 2,105-2,977 feet, plugged back to 2,240 feet, 10,460,000 feet of gas. Royal Oil & Gas Co. No. 29 Keller, 2,430-2,548 feet, 2,222 bbls. flowing. Skelly Oil Co. No. 16 Johnson, 2,525-2,545 feet, 497 bbls. flowing.

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East and East Central Texas

THIRD TEST IN TALCO AREA IS REPORTED NEAR COMPLETION

By L. E. BREDBERG

DALLAS, Tex., Apr. 27.—The Talco area in northwest Titus County and northeast Franklin County continues to hold interest. The third test is nearing completion and several locations have been reported near the discovery and in the 2½-mile western extension, with acreage along the fault running to the west looking more favorable.

Humble Oil & Refining Co. No. 1 Galt, about 1 mile east of the discovery, and about midway between that well and a test on the Groves land which missed production in the Paluxy sand, cored some oil sand from 4,196-4,214 feet, and is coring below 4,220 feet. Base of the Georgetown lime was logged at 4,169 feet, according to the driller, about 3 feet deeper on subsea datum than the discovery. It is in the R. I. Winn Survey.

Jules Alford, trustee No. 1 W. D. Fry, in the I. P. Stern Survey, 1½ miles south of the Talco discovery, has been abandoned at 4,220 feet. Elevation is 319 feet. This is the third dry hole.

Another interesting location has been staked by C. & G. Oil Co. (Gene German) of Dallas, on the J. W. Cooper lands, in the J. M. Nugent Survey, about 1½ miles northwest of Talco. This is the first location north.

B. C. Morrison has staked location in the center of Lot 1, Block 30, in Talco townsite, one of several west of the discovery in the townsite, but none has started drilling. The low gravity of the oil and the small price, 60 cents per barrel, and the potential of the two wells completed is discouraging rapid development.

An interesting location north of production is that of Lucey Petroleum Co. on the A. W. Crawford lands in the Orlando James Survey, about 1,700 feet northwest of the Hughes and King extension well west of the discovery. The Lucey location is in Franklin County. Derrick is up.

Derrick has been completed and rigging up commenced on LaSalle No. 1 F. M. Batts, on a 100-acre tract and in survey by the same name. This location is about 3 miles southwest of Humble Oil & Refining Co. No. 1 Hughes and King flowing well in the Talco area.

To the northwest of Titus County, North Texas Syndicate is spudding on the Haynes and McCuistion lands in the A. W. Wright Survey, about 4 miles northeast of Garrett Bluff in Lamar County, one of three tests to be drilled.

Interesting Trinity Test

Gulf Oil Corp., which opened the Camp Hill pool in eastern Anderson County, is to make a try for production from the fourth pay horizon, production already coming from the Carrizo or shallow sand, Sub-Clarksville and Woodbine. The company is to carry No. 1 Ross, in the Robert Irwin Survey, down to the Paluxy sand or to the Glen Rose.

Humble Oil & Refining Co. has a rig up for a wildcat 4 miles southwest of Jacksonville in Cherokee County, on the S. D. Goodson farm in the I. Reynolds Survey. J. Edward Mills of Fort Worth and others have spudded in No. 1 S. Grocholsk in the SE corner of Falls County, in the Kosse area to the south of the Mexia producing area and fault plane in Limestone County. It is near the center of a 7,500-acre block 5 miles southwest of Kosse.

One more location was staked in Angelina County and a new shallow test is drilling below 425 feet 3½ miles east of Huntington. The new location was made by G. E. Ginter on lands of the Martin Wagon Works, Evans Survey, approximately 2 miles west of Homer. The new test is drilling on the Foster lands in the J. L. A. Berry Survey. Dr. W. H. Wilson is drilling this test. Lee-Tex Oil Co., openers of a small shallow producing area about 5 miles east of Diboll, drilled a dry hole on the Southern Pine Lumber Co. lands. Total depth was 2,051 feet. Elevation is 210 feet.

East Texas Field

There are now 20,375 producing wells in the East Texas field with 53 locations staked this week, and over 60 new producers added, operations not slowing down although the Railroad Commission has held up many exception permits.

There are 84 locations, derricks and rigging up operations under way in the field with 133 tests drilling and 52 shut down, making a total of 269 operations.

Daily average deliveries are still running over and above reported production, although this week they constituted a small margin, only 2,340 bbls. per day, production averaging around 447,380 bbls. per day.

Since the first of the year the scramble for pipe line connections has resulted in the exchange of 1,074 wells on 203 leases. Major companies have lost 251 wells on 38 leases, amounting to 5,435 bbls. per day, to other major pipe line companies. Majors have lost 763 wells on 143 leases, amounting to a daily allowable of 15,850 bbls. to independent pipe line companies, and independents have lost 60 wells on 22 leases, amounting to 14,630 bbls per day, to major transporting units.

Van Zandt County

Pure Oil Co. No. 13 York, total depth 2,928 feet, 8 bbls. first hour through eleven-sixteenths inch choke.

Anderson County

Cortex Oil Co. No. 1 H. W. Barton, total depth 4,059 feet, 138 bbls. in 24 hours through one-eighth inch choke. Tide Water and Seaboard Oil Corp. No. 2-B Royall & Cone, total depth 4,095 feet, 130 bbls. in 24 hours through one-eighth inch choke.

EAST TEXAS COMPLETIONS

Gregg County

Arkansas Fuel Oil Co. No. 15-A McKinley, 3,605-3,630 feet, 22 bbls. in 15 minutes; No. 13-B McKinley, 3,558-3,583 feet, 25 bbls. in 15 minutes; No. 12-B McPherson, 3,500-3,527 feet, 19 bbls. in 15 minutes. Humble Oil & Refining Co. No. 26 Mackey, 3,566-3,581 feet, 72 bbls. per hour.

L. & G. Oil Co. No. 1 Castleberry, 3,592-3,597 feet, 25 bbls. in six hours. Joe Long No. 5-C Owens, 3,640-3,649 feet, 70 bbls. per hour. Magnolia Petroleum Co. No. 3 Fuller, 3,668-3,689 feet, 50 bbls. per day on pump. Ownby No. 1 Cabinass, 3,606-3,605 feet, 81 bbls. in four hours. Smith No. 1 Smith, 3,630-3,637 feet, 17 bbls. per hour. Stanolind Oil & Gas Co. No. 9 Meadows, 3,665-3,695 fet, 12 bbls. in 15 minutes.

Tide Water and Stanolind No. 43-B Flewellen, 3,670-3,690 feet, 9 bbls. in 10 minutes. Callender No. 12 Walker, 3,598-3,599 feet, 30 bbls. per hour on swab. Constantine Rfg. Co. No. 3 Utzman, 3,74-3,500 feet, 8 bbls. per hour on pump. Flannigan Prod. Co. No. 6 Walker, 3,599-3,601 feet, 60 bbls. per hour. Grace Oil Co. No. 3 Barton, 3,504-3,513 feet, 20 bbls. in 20 minutes. Graham Production Co. & Warren, No. 1 King, 3,432-3,457 feet, 20 bbls. in 45 minutes. Gulf Oil Corp. No. 3 Clayborn, 3,646-3,651 feet, 20 bbls. in two hours on swab. Humble Oil & Refining Co. No. 72-B Laird, total depth 3,615 feet, 11 bbls. in 45 minutes; No. 82-B Laird, 3,558-3,632 feet, 65 bbls. per hour.

Hunter & Rowe No. 10 Still, 3,551-3,562 feet, 27 bbls. per hour. King No. 1 Carr, 3,457-3,478 feet, 50 bbls. in 35 minutes. Magnolia Petroleum Co. No. 1 Still, 3,607-3,614 feet, 10 bbls. in four hours on pump. Producers Investment Co. No. 2 Radford, 3,654-3,656 feet, 20 bbls. in 45 minutes. Sinclair Prairie No. 55-A King, 3,508-3,550 feet, 25 bbls. in 25 minutes; No. 22-B King, 3,423-3,470 feet, 20 bbls. in 20 minutes; No. 23-B King, 3,439-3,472 feet, 25 bbls. in 30 minutes; No. 41-B King, 3,436-3,472 feet, 25 bbls. in 15 minutes; No. 42-B King, 3,450-3,485 feet, 25 bbls. in 15 minutes. Southland Drilling Co. and others No. 1 Choice, 3,667-3,668 feet, 45 bbls. per hour. Texas Co. No. 12 Walker, 3,577-3,583 feet, 30 bbls. per hour. Tide Water Oil Co. No. 28 Barton, 3,536-3,584 feet, 10 bbls. in 10 minutes.

Rusk County

Humble Oil & Refining Co. No. 166 Crim, 3,608-3,621 feet, 104 bbls. per hour; No. 74-B Laird, 3,535-3,601 feet, 40 bbls. per hour. No. 77-B Laird, 3,532-3,626 feet, 40 bbls. per hour.

King No. 1 Florey, 3,631-3,632 feet, 10 bbls. per hour. Woodford & Jones No. 1 Dickerson, 3,542-3,656 feet, 60 bbls. in 24 hours on pump. Atlantic Oil Producing Co. No. 3-B Young, 3,656-3,715 feet, 70 bbls. per hour. Royal Petroleum Co. No. 6 Woodley, 3,575-3,620 feet, 20 bbls. in 11 hours on pump. Elsep Oil Co. No. 1-B Pinkston, 3,562-3,593 feet, 25 bbls. per hour. Gant and others No. 22 Moore, 3,555-3,572 feet, 35 bbls. per hour.

Humble Oil & Refining Co. No. 52-A Kangerga, 3,630-3,663 feet, 27 bbls. per hour on 1 11/16-inch choke. No. 53-A Silvey, 3,621-3,732 feet, 75 bbls. per hour through 1 11/16-inch choke. Marathon Oil Co. No. 35 Moore, 3,649-3,740 feet, 10 bbls. in 15 minutes. Maryland Oil Corp. No. 2 Brandon, 3,820-3,821 feet, 40 bbls. in 45 minutes. Oil Union Oil Co. No. 3 Frederick, 3,570-3,640 feet, 8 bbls. per hour on pump.

Red Irion No. 1 Murphy, 3,545-3,611 feet, 40 bbls. in three hours on pump. Sinclair Prairie Oil Co. No. 21-B Mayfield, 3,619-3,625 feet, 23 bbls. in 15 minutes. Texas-Canadian Oil Co. No. 2 Frederick, 3,585-3,635 feet, 14 bbls. per hour on pump, shot twice; No. 3 Frederick, 3,551-3,622 feet, 12 bbls. per hour on pump; No. 4 Frederick, 3,575-3,650 feet, 10 bbls. per hour on pump, shot 20 quarts.

Upshur County

Conservative Oil Co. No. 10 Mackey, 3,689-3,691 feet, 20 bbls. in 45 minutes. Fields No. 10 Walker, 3,665-3,675 feet, 60 bbls. per hour. Illinois Oil Co. No. 1 Hamilton, 3,751-3,752 feet, 12 bbls. per day on pump. Manziel No. 2 Mackey, 3,731-3,734 feet, 65 bbls. per hour through 1-inch choke. Nivia Oil Co. No. 2 Morgan, 3,710-3,711 feet 51 bbls. in four hours. Perski and others No. 6 Callahan, 3,671-3,689 feet, 12 bbls. per hour on pump.

Stanolind and Falcon No. 4 Cloud, 3,630-3,633 feet, 20 bbls. in 26 minutes. Stedham and Thrasher No. 2 O'Byrne, 3,728-3,729 feet, 25 bbls. per hour. Texfield Oil Co. No. 6 Shelton, 3,730-3,739 feet, 30 bbls. per hour. Trail No. 3 Shelton, junked and abandoned 3,698 feet. Watts No. 4 O'Byrne, 3,765-3,785 feet, 25 bbls. in 30 minutes. Wood No. 5 Mackey, 3,732-3,734 feet, 20 bbls. in 30 minutes.

Smith County

Barclay No. 1 Jackson, 3,849-3,850 feet, 50 bbls. per hour through three-fourths inch choke. Sinclair Prairie Oil Co. No. 63-A Mayfield, 3,757-3,762 feet, 30 bbls. in 15 minutes. Rudeo Oil Co. No. 8 Cooke, 3,715-3,716 feet, 30 bbls. in 30 minutes. Sun Oil Co. No. 6 Henson, 3,628-3,638 feet, 20 bbls. per hour. Texas Canadian Oil Co. No. 9 Pace, 3,837-3,838 feet, 80 bbls. per hour.

Rocky Mountain Area

ARCHULETA POOL ESTIMATED INCREASING IN IMPORTANCE

By T. R. INGRAM

DENVER, Colo., Apr. 27.—The William E. Hughes Estate, which opened a new oil pool in Archuleta County, Colorado, last fall, estimates that wells so far drilled indicate a potential reserve of 10,000,000 bbls. of crude with the ultimate area of the field still undisclosed. The Paul R. Robb Petroleum Corp. has begun drilling on a deep test in Baca County, southeastern corner of the state. The South Park Oil Co.'s discovery on the Hartsel anticline in Park County is expected to drill deeper into the sand this week. It started a rush for leases.

In Wyoming the Sinclair-Wyoming Oil Co. is resuming operations in the Muskrat field in Fremont County, where a 75,000,000-foot gas well was completed in 1928, with only one well drilled since the discovery. A structural Sundance sand test is to be drilled on the James Lake structure in Carbon County by the James Lake Oil Co. W. O. Taylor and others' fault block test on the Byron structure in Big Horn County will prove up more than a mile of additional territory. Operators in the Osage field expect to maintain production up to market requirements this year without additional drilling by using a new electric well heating method.

Montana scored an important discovery on the Baker-Glendive anticline in the eastern part of the state when the Montana-Dakota Utilities Co.'s deep test flowed 30 bbls. an hour on a drill stem test. A big play is predicted as a result. Cut Bank has four completions and four new locations.

Six wells were completed in the Monument area of New Mexico. Gulf Oil Corp. No. 1 Luthy, C SW NW section 29-19-37, had oil pay at 3,830-3,946 feet, total depth, and flowed 000 bbls. of oil through tubing in the first 24 hours after acidizing. Amerada Petroleum Corp. No. 1 State "O," C NW NE section 30-19-37, flowed 3,144 bbls. natural through tubing in the first 24 hours and gauged 1,415,000 feet of gas. Oil pay was had at 3,858-3,975 feet, total depth. Same operator's No. 1 Culp, SW SW SE section 31-19-37, flowed 2,280 bbls. through 1-inch tubing choke in the first 24 hours after acidizing, from oil pay at 3,800-90 feet, total depth. Same operator's No. 3 Weir, C NW SW section 35-19-36, had oil pay at 3,829-3,945 feet, total depth, was acidized and flowed 1,488 bbls. through 1-inch tubing choke in the first 24 hours. Shell Petroleum Corp. No. 2 State "B," C NW NW section 36-19-36, flowed 696 bbls. in the first 24 hours after acidizing and was completed. It had oil pay at 3,873-3,953 feet. Continental Oil Co. No. 1-A-3 J. L. Reed, C NE NE section 3-20-36, flowed 720 bbls. between drill pipe and casing in 24 hours, produced 1,800,000 feet of gas and was completed. The pay was encountered at 3,839-96 feet, total depth.

In the Eunice district, seven wells were completed. Continental Oil Co. No. 6-B-4 Meyer, C SE NW section 4-21-36, flowed 1,584 bbls. through tubing choke in 24 hours from oil pay at 3,795-3,866 feet, total depth, and was completed. Same operator's No. 8-B-4 Meyer, C SW NE section 4-21-36, had pay at 3,780-3,852 feet, total depth, and flowed 2,208 bbls. through tubing choke in 24 hours, natural. Gulf Oil Corp. No. 2 Bell-State "C," C SW NW section 15-21-36, flowed 1,512 bbls. natural through tubing in 24 hours from pay at 3,790-3,869 feet, total depth. Humble Oil & Refining Co. No. 9 State "B," C NE SW section 29-21-36, had pay at 3,882-3,914 feet, total depth, and flowed 432 bbls. through tubing choke in 24 hours. Continental Oil Co. No. 30-A-2 Lockhart, C NE NE section 30-21-36, deepened from old total depth of 3,942 to 3,983 feet, was acidized and flowed 114 bbls. of oil and 11 bbls. of water through tubing in 24 hours. General Crude Oil Co. No. 1 State "E," C NW SW section 32-21-36, an old well deepened, had oil pay at 3,964-74 feet, total depth, and pumped 20 bbls. of oil and 50 bbls. of water in 10 hours after acidizing.

One producer in the Jal sector was completed. Stanolind Oil & Gas Co. No. 29 Cyrus Farnsworth, C SW NW section 18-26-37, flowed 2,520 bbls. natural through tubing in the first 24 hours from oil pay at 3,026-35 feet, total depth.

Eunice Area

Continental Oil Co. No. 7-B-4 Meyer, C NW SE sec. 4-21-36. T.D. 3,792 ft.; produced 103 bbls. per hour.

Gulf Oil Corp. No. 8 Bell-Ramsey-State, C NW NW sec. 4-21-36. T.D. 2,900 ft.; shut down for repairs.

Gulf Oil Corp. No. 1 Orcutt, C SW SE sec. 5-21-36. T.D. 3,862 ft.; set 6⅛-in. casing at 3,750 ft. in new hole.

Gulf Oil Corp. No. 2 Orcutt, C NE NE sec. 5-21-36. T.D. 3,850 ft.; set 5⅛-in. casing.

Humble O. & R. Co. No. 3 Adkins, C NE SW sec. 10-21-36. Drlg. 3,496 ft.

Gulf Oil Corp. No. 5 Arnott-Ramsey "C," C SE SW sec. 21-21-36. T.D. 3,890 ft.; testing.

Gulf Oil Corp. No. 6 Arnott-Ramsey "C," C NE NW sec. 21-21-36. T.D. 3,570 ft.; whipstock at 3,031 ft.; drlg. by at 3,060 ft.

Continental Oil Co. No. 4-B-28 Lockhart, C SW SW sec. 28-21-36. T.D. 3,927 ft.; P.B. to 3,901 ft.; testing.

Continental Oil Co. No. 5-B-28 Lockhart, C NW NE sec. 28-21-36. T.D. 3,866 ft.; P.B. 3,910 ft.; flowed 2½ bbls. per hour after shot; to deepen.

Empire G. & F. Co. No. 2 Felton, C SE NW sec. 28-21-36. T.D. 3,930 ft.; testing.

Empire G. & F. Co. No. 4 State "D," C SE NE sec. 32-21-36, five-eighths mile N part of No. 157 lease. T.D. 3,941 ft.; swabbed dry; to deepen.

Gulf Oil Corp. No. 2 Janda "B," C NE SE sec. 32-21-36. Set 5⅛-in. csg. 3,860 ft.

Gulf Oil Corp. No. 1 Arnott-Ramsey "D," C NW NW sec. 32-21-36. T.D. 3,885 ft.; swabbing.

The Texas Co. No. 1 State Aggies, C SE SE sec. 31-20-37, west offset No. 196 lease. T.D. 3,862 ft.; flowed 40 bbls. per hour after acidizing.

Shell Pet. Corp. No. 1 State-Endura "D," C SE NW sec. 11-21-35. Drlg. 4,134 ft.

Shell Pet. Corp. No. 1 State "H," C SE SE sec. 13-21-36. T.D. 3,954 ft.; plugged back.

Continental Oil Co. No. 6-A-17 Meyer, C NW SW sec. 17-21-36. Drlg. 3,038 ft.

Continental Oil Co. No. 5-A-18 Meyer, C SE NE sec. 18-21-36. Drlg. 1,425 ft.

Jim Murray No. 2 Wallace, C NW NW sec. 3-21-36. T.D. 3,735 ft.; to take drill stem test.

Continental Oil Co. No. 1-B-14 Lockhart, C SW NW sec. 14-21-36. T.D. 375 ft.; set 10¾-in. casing.

General Crude Oil Co. No. 2 State "E," C NE SW sec. 32-21-36. Rig.

Shell Pet. Corp. No. 1 State "E," C NE NE sec. 6-21-36. Rigging up rotary.

Gulf Oil Corp. No. 1 Janda "C," C NW SW sec. 15-21-36. T.D. 1,480 ft.; set 7⅝-in. casing.

Tide Water Oil Co. No. 2 State "E," C SE SE sec. 15-21-36. T.D. 1,595 ft.; set 9⅝-in. casing.

Peerless O. & G. Co. No. 2 State, NE NW SW sec. 29-21-36. Location.

Devonian Oil Co. No. 4 State-Heasley, C SW SW sec. 5-21-36. T.D. 255 ft.; set 12½-in. casing.

Atlantic Oil Producing Co. No. 1 State "K," C SE SW sec. 6-21-36. Rigging up rotary.

Humble Oil & Ref. Co. No. 4 Adkins, C NW SW sec. 10-21-36. Spudded.

Shell Pet. Corp. No. 1 State "J," C SE SW sec. 32-20-37. Cellar and pits.

Gulf Oil Corp. No. 9 Bell-Ramsey, C SW SW sec. 4-21-36. Cellar and pits.

Gulf Oil Corp. No. 4 Orcutt, C SE NE sec. 6-21-36. Rigging up.

Gulf Oil Corp. No. 1 Frona Leck, C NW NE sec. 14-21-36. T.D. 35 ft.; set 15½-in. casing.

Gulf Oil Corp. No. 7 Arnott-Ramsey "C," C NW NE sec. 21-21-36. Cellar and pits.

Continental Oil Co. No. 9-B-4 Meyer, C NE NW sec. 4-21-36. Location.

Continental Oil Co. No. 10-B-4 Meyer, C NE NE sec. 4-21-36. Location.

Continental Oil Co. No. 11-B-4 Meyer, C SE SE sec. 4-21-36. Location.

Humble Oil & Refining Co. No. 5 Adkins, C SE SW sec. 10-21-36. Cellar, pits.

Samedan Oil Co. No. 1 Marshall, C SW NW sec. 12-21-36. Location.

Continental Oil Co. No. 5-A-18 Lockhart, C SE SW sec. 18-21-36. Location.

Continental Oil Co. No. 6-A-18 Meyer, C NW NE sec. 18-21-36. Location.

Continental Oil Co. No. 2-B-18 Meyer, C NE NW sec. 18-21-36. Location.

Tide Water Oil Co. No. 1 State "G," C SE NE sec. 21-21-36. Location.

Continental Oil Co. No. 6-B-28 Lockhart, C NE SW sec. 28-21-36. Location.

Monument Area

Texas Co. No. 2 Saunders, C SW SE sec. 18-19-37. T.D. 3,875 ft.; set 7-in. csg.

Oilwell Drlg. Co. No. 1 State "A," C SW NE sec. 29-19-37. T.D. 3,952 ft.; swbg.

Continental Oil Co. No. 2-C-30 State, C NW SW sec. 30-19-37. T.D. 3,910 ft.; drill pipe stuck; fishing.

Anderson & Prichard Oil Corp. No. 1 Britt "A," C SE SW sec. 6-20-37. Drlg. 3,880 ft.

Amerada Pet. No. 1 Weir "A," C NW SW sec. 25-19-36. Swabbed 34 bbls. per hour for 24 hrs. after acidizing; T.D. 4,001 ft.

Skelly Oil Co. No. 1 Christmas, C SW SW sec. 25-19-36. T.D. 3,942 ft.; flowed 77 bbls. in 24 hrs.; to reacidize.

Gulf Oil Corp. No. 6 Culp, C NW NE sec. 19-19-37. T.D. 3,815 ft.; set 5½-in. csg.

Gulf Oil Corp. No. 2 Graham-State "D," C SE SE sec. 19-19-37. T.D. 3,842 ft.; to take drill stem test.

Shell Pet. Corp. No. 2 State "D," C NE SE sec. 19-19-37. T.D. 3,824 ft.; set 5½-in. csg.

Gulf Oil Corp. No. 1 G. C. Mathews, C SW SE sec. 6-20-37. Drlg. 3,490 ft.

Gulf Oil Corp. No. 1 A. B. Reeves, C NW SW sec. 29-20-37. Wildcat; drlg. 3,134 ft.

Gulf Oil Corp. No. 3 Graham-State "C," C SW NE sec. 24-29-36. Spudded.

Amerada Pet. Corp. No. 4 Weir, C SE NW sec. 35-19-36. T.D. 3,945 ft.; testing.

Sun Oil Co. No. 4 Weir, C SW NE sec. 35-19-36. Drlg. 3,178 ft.

Sun Oil Co. No. 6 Weir, C NW NE sec. 35-19-36. Loc.

Texas Co. No. 2 Mattern, C SW SW sec. 20-19-37. Drlg. 2,350 ft.

Amerada Pet. Corp. No. 1 State "P," C NW SW sec. 29-19-37. Drlg. 917 ft.

Amerada Pet. Corp. No. 1 State "R," C NE SW sec. 29-19-37. Rigging up rotary.

Amerada Pet. Corp. No. 2 State "O," C SW NE sec. 30-19-37. Drlg. 1,348 ft.

Texas Co. No. 2 Phillips, NE NE NW sec. 6-20-37. Drlg. 3,010 ft.

Amerada Pet. Corp. No. 1 Weir "B," C SW NE sec. 26-19-36. T.D. 3,800 ft.; set csg.

Amerada Pet. Corp. No. 2 State "H," C NW SE sec. 1-20-36. T.D. 2,409 ft.; set csg.

Skelly Oil Co. No. 2 State "D," C NE SE sec. 1-20-36. T.D. 2,500 ft.; set csg.

Texas Co. No. 4 State "E," C NE SW sec. 1-20-36. Drlg. 1,073 ft.

Tide Water Oil Co. No. 1 State "F," C NW NW sec. 20-19-37. Set 13-in. csg.; drlg. 2,695 ft.

Ohio Oil Co. No. 2 State-Elliott, C NE SE sec. 30-19-37. T.D. 1,310 ft.; set 9⅝-in. csg.

Continental Oil Co. No. 2-A-6 Britt, C NW SW sec. 6-20-37. Drlg. 2,388 ft.

Fred Turner, Jr. No. 1 State "A," NE NW SW sec. 2-20-36. Drlg. 870 ft.

Texas Co. No. 3 Phillips, C SW NW sec. 6-20-37. Rigging up rotary.

Anderson-Prichard Oil Corp. No. 3 Britt, SE SW NE sec. 7-20-37. Drlg. water well.

Sun Oil Co. No. 1 State, C NE NE sec. 25-19-36. Cellar and pits.

Anderson-Prichard Oil Corp. No. 1 State, C SW NW sec. 2-20-36. Cellar and pits.

Gulf Oil Corp. No. 2 Luthy, C NW NW sec. 29-19-37. Spudded.

Amerada Pet. Corp. No. 3 State "O," C SE NE sec. 30-19-37. Rigging up rotary.

Continental Oil Co. No. 4 State "C," C SW NW sec. 30-19-37. Cellar and pits.

Continental Oil Co. No. 3 State "C," C SE NW sec. 30-19-37. T.D. 59 ft.; set 15½-in. csg.

Amerada Pet. Corp. No. 1 Lambert, NW NW NE sec. 6-20-37. Rigging up rotary.

Amerada Pet. Corp. No. 1 State "S," C SE SW sec. 2-20-36. Location.

Gulf Oil Corp. No. 1 S. T. Burk, C NE NE sec. 28-19-37. Cellar and pits.

Amerada Pet. Corp. No. 4 State "O," C NE NE sec. 30-19-37. Location.

Texas Co. No. 1 State "J," C NE SW sec. 24-19-36. Cellar and pits.

Amerada Pet. Corp. No. 1 State "T," C SE SW sec. 25-19-36. Location.

Shell Pet. Corp. No. 1 J. A. Foster, C SE SE sec. 34-19-36. Cellar and pits.

Amerada Pet. Corp. No. 3 Phillips, C SW NE sec. 1-20-36. Location.

Amerada Pet. Corp. No. 3 State "D," C SE NW sec. 1-20-36. Location.

Hobbs Area

Shell Pet. Corp. No. 1 State "E," C E half SE SE sec. 14-18-37. T.D. 4,374 ft.; P.B. 4,178 ft.; shut in.

Continental Oil Co. No. 3-B-12 State, C NE SW sec. 13-18-37. T.D. 3,955 ft.; set 7-in. csg.

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 23-18-37; wildcat. Old well plugging back from 4,238 to 4,224 ft.; testing and swabbing.

J. P. Cusack No. 2 Moon "B," 1,315 ft. from N line and 1,120 ft. from E line, NE sec. 28-18-38. T.D. 4,225 ft.; acidized; flowed 130 bbls. in 12 hrs.; to reacidize.

Cooper Area

Liberty Oil & Drlg. Co. No. 1 J. W. Hair, SW SW SE sec. 24-24-37. Drlg. 3,460 ft.

Plains Prod. Co. No. 1 R. L. Mosley, C NW SE sec. 34-24-37. T.D. 3,551 ft.; show sulfur water; P.B. 3,520 ft.; gauged 2,360,000 ft. gas.

Southern Oil Corp. No. 1 Vaughan, C SW SE sec. 15-24-36. Rigging up rotary.

Southern Oil Corp. No. 1 Gates, C NW NW sec. 23-24-36. Moving in material.

Skelly Oil Co. No. 5 Coates, C NE SE sec. 3-24-36. Location.

Eddy County

Etz Bros. No. 2 State, C NW SW NE sec. 16-17-30. Drlg. 2,490 ft.; est. 20 bbls. daily.

Ohio Oil Co. No. 1 State-McCullough, SE SW SW sec. 16-17-30. Drlg. 3,087 ft.; flows 20 bbls. dly.

Premier Pet. Corp. No. 2 Dexter "E," NW SW NE sec. 20-17-30. T.D. 3,000 ft.; set csg.

Tignor, Etz. & Keys No. 1 Keys "B," sec. 3-17-28. T.D. 1,315 ft.; set csg.

Red Lake Oil Co. No. 6 State, NE NE SW sec. 22-17-28. Drlg. 1,777 ft.

D. & B. Oil Co. No. 1 Jenkins, NW SW NW sec. 20-17-30. T.D. 3,258 ft.; testing; est. 200 B.P.D.

Dexter & Berry No. 1 Berry, NW NE NW sec. 21-17-30. Drlg. 2,583 ft.

Dooley & Dixon No. 1 Commerce, C W½ NW NW sec. 18-20-27. Drlg. 662 ft.

Tex Patillo No. 2 Thomason, NE cor. sec. 1-20-28. T.D. 1,106 ft.; S.D.

Sims Area

Samedan Oil Co. No. 1 Parks, 330 ft. from S and 400 ft. from W lines, SW¼ sec. 14-22-37. Drlg. 2,980 ft.

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Continental Oil Co. No. 1-A-22 Elliott, C SW SW sec. 22-22-37. Drlg. 1,695 ft.
Skelly Oil Co. No. 1 B. L. King, C SW SE sec. 32-22-37. T.D. 3,650 ft.; flowed 84 bbls. oil in 45 minutes after shut in for 11 days; died; to pump.
Skelly Oil Co. No. 1 Ella Simms, C SW NE sec. 3-23-37. Location.
Penrose & Rowan No. 2 Cary, C NE SW sec. 22-22-37. Drlg. 2,410 ft.
Sun Oil Co. No. 1 Richards, C NE SE sec. 6-23-37. Drlg. 3,375 ft.
Humble Oil & Refining Co. No. 1 W. B. Farrell, C SW SE sec. 23-22-37. Rigging up machine.
Tide Water Oil Co. No. 1 A. Walden, C SE NE sec. 21-22-37. Rigging up machine.
Magnolia Pet. Co. No. 1 Cary, C NE SE sec. 21-22-37. Moving in.
Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,150 ft.; set 8¼-in. csg.

Lea County—Miscellaneous

Culbertson-Irwin & Stovall No. 1 J. B. Humphreys, C SE SW sec. 3-25-37. Drlg. 3,500 ft.
Plains Prod. Co. No. 1 George Smith, C SE SE sec. 4-25-37. Drlg. 3,060 ft.
Culbertson-Irwin & Stovall No. 1 J. A. Stuart, C SW SE sec. 10-25-37. T.D. 3,-294 ft.; hole full of oil; blew out; open flow est. 500 to 1,000 bbls.; fishing.
Harry Leonard No. 1 Justice, SW NW NW sec. 20-25-37. T.D. 3,501 ft.; shut in and shut down.
Harry Leonard No. 1 Leonard-Lanhart, C SW NE sec. 21-25-37 (on Humble acreage). T.D. 3,007 ft.; gas gauged 4,480,-000 ft.
Texas Co. and Repello Oil Co. No. 1 Lanchart, C NE sec. 29-25-37. T.D. 2,770 ft.; killing gas to drill plug.
W. L. Todd et al No. 1 Lemon Permit, C NW SW sec. 17-21-32. T.D. 3,752 ft.; shut down.
Maljamar O. & G. Co. No. 6 Baisch, C NW SE sec. 21-17-32. Drlg. 4,070 ft.
Sun Oil Co. No. 1 Weatherly, C NE SW sec. 17-21-37, wildcat. T.D. 2,586 ft.; set 9⅝-in. casing.
Ohio Oil Co. No. 1 W. H. Turner, C NE SE sec. 29-21-37. T.D. 290 ft.; set 10¾-in. csg.
Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. T.D. 1,250 ft.; set 8¼-in. casing.
Rowan et al No. 1 Mattern, C SW SE sec. 7-22-37. Spudded and shut down.
C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37, wildcat. Drlg. 1,400 ft.
Gulf Oil Corp. No. 1 E. King, C SW NW sec. 28-21-37. Rigging up rotary.
Gulf Oil Corp. No. 1 W. T. McCommack, C NE NE sec. 32-21-37. Rigging up rotary.
Continental Oil Co. No. 1 J. C. Farney, C SW SE sec. 5-23-36. Wildcat. Location.
Gulf Oil Corp. No. 1 S. J. Carr, C NW SW sec. 2-24-37. Location.
Gulf Oil Corp. No. 2 N. F. Humphreys, C NE NW sec. 25-25-36. Location.
Sun Oil Co. No. 1 Stuart, C NW NE sec. 15-25-37. Rigging up rotary.
Continental Oil Co. No. 2-A-19 Eaves, C SW SW sec. 19-26-37. Location.

Ohio Area

Shell-Devonian No. 1 Christmas, C NE NE sec. 21-22-36. T.D. 3,859 ft.; swabbed 20 bbls. in 6 hours; testing.

Chaves County

Tannehill No. 2 Campbell, C NE SE sec. 1-11-25. Drlg. 1,325 ft.
Comanche Drlg. Co. No. 2 Sloop & Purcell, C NE NE sec. 15-11-26. Drlg. 90 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. 1,450 ft. sd. and gravel.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 20-9n-17e. Drlg. 560 ft.

Harding County

Khaay et al No. 1 De Baca, C sec. 19-20n-31e. Rng. 8¼-in. at 847 ft.; 10-in. at 250 ft.

McKinley County

S. Dysart et al No. 1 Bouton, CEL NW NE sec. 14-14n-10w. O.W.D.D.; T.D. 1,-490 ft.; rmg. at 600 ft.
Seward et al No. 1 State, NE SE SE sec. 2-19n-9w. Drlg. 585 ft. in sh.
Seward et al No. 1 fee, C NW SE sec. 35-20n-9w. S.D. 437 ft. in sh.
Red Mountain O. & G. Co. No. 1 State, NE NE SW sec. 21-20n-9w. S.D. 100 ft.; (formerly Dave Stacey).
Foster & Clark No. 1 Railroad Land, NE NE NW sec. 29-20-9w. Spud to 75 ft. and S.D.
Montrose O. & G. Co. No. 1 State, NE NE sec. 28-20n-9w. R.U. Spudder.
Claude Walker No. 1 Patd, NE SW SE sec. 20-20n-9w. Ready to spud.

San Juan County

Atchison & Galloway No. 1 Ptd., C SE SE sec. 19-29n-11w. S.D. without R.U.
Continental Oil Co. No. 53 Tribal, SE SE NW sec. 2-29n-19w. R.U.
W. L. Hair No. 1 Hair, NE NW NE sec. 23-29n-11w. Drlg. 684 ft.
Jack Amenda No. 2, SW NW SW sec. 25-30n-12w. Drlg. 1,275 ft.; show of 22,-000 ft. of gas at 935-65 ft.
Jack Amenda No. 4 fee, NW NE SW sec. 25-30n-12w. Drlg. 680 ft.
J. D. Cross et al No. 1 Wilson, SW SW SE sec. 17-30-11w. S.D. 610 ft.
Cross & Pool No. 1 Aztec, sec. 1-30-11w. Making wtr. shutoff at 740 ft.
Nick Spatter No. 1 fee, C NE SW sec. 32-31-11w. S.D. 1,780 ft.; T.A.
Southern Union Gas Co. No. 6 Government, C NW NW sec. 19-28-10w. Ready to spud.

Quay County

Quay County Dev. Co. No. 1 Wallace, SW SW SE sec. 19-9n-33e. S.R. 816 ft.; rainbows at 814 ft.; show S.W. at 775 ft.

San Miguel County

Cabra Springs O. & G. Co. No. 1 Cabra Springs ranch, SW NE NE sec. 23-12n-22e. T.D. 4,045 ft.; prep. to resume.
Cabra Springs O. & G. Co. No. 1 Jones ranch, SW SW SW sec 31-12n-22e. T.D. 726 ft.; prep. to build standard rig to replace Fort Worth spudder.

Torrance County

45 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9-8e. Drlg. 1,635 ft.; hd. gr. L.
Bruce Frazier No. 1 Frazier, SE sec. 12-2n-31e. Drlg. 1,575 ft. sd. and L.

COLORADO

Adams County

E. M. Butler et al No. 1 Kate Edwards, NW SW NW sec. 15-3s-66w. M.I. portable rotary (first report).
Glenridge Oil Corp. No. 1 Hills, SE SE NE sec. 27-3s-64. Deepened to 4,165 ft.; cmtd. to bottom and drlg. plug.
Riddle Pet. Co. No. 1 Baxter, C SW sec. 2-3s-6w. S.D. 700 ft. for D.P.

Archuleta County

The new oil pool opened up late in 1935 on the Tierra Amarilla land grant in Archuleta County by the William E. Hughes Estate is gradually revealing the importance of the discovery as development proceeds. Operations have continued during the winter with only such temporary delays as were made necessary by weather conditions. Five wells have been drilled into the Dakota sand at around 1,200 feet to date. Three of these were completed as producers and two were plugged and abandoned.

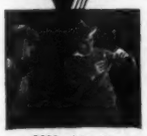
No. 4 Gramps, approximately CSL SE SE section 24-33n-2e, which was drilled on the recommendation of W. A. Waldsmith, geologist, with a view to obtaining subsurface data rather than making an oil well, was plugged and abandoned the past week. Depths of wells are not being disclosed, but this well yielded important information and had 1,100 feet of oil from the upper Dakota before it ran into water. The axis of the structure has been changed several times as drilling revealed the subsurface condition, and this well and No. 5 Gramps, half a mile to the northwest, along with the other wells, now indicate that the structure trends northeast-southwest and continues to rise toward the northeast.

None of the producing wells have been drilled to the bottom of the sand and none have been given production tests over any period. Mr. Hughes estimates that around 1,000 acres is already proven. Taking into consideration the proven area and the porosity of the sand, it is estimated that development to date proves reserves of around 10,000,000 bbls. No. 5 Gramps, the well farthest north and which showed the rise of the structure in that direction, is estimated by Mr. Hughes at 1,000 bbls. a day, while others put it at 1,800 to 3,000 bbls. In this well an 8-inch swab was run to 500 feet and the pump set at 30 strokes, but the oil rose faster than it could be swabbed down and the swab was pulled and the well again shut in.

The next two wells are to be drilled 1,000 feet to the northeast of No. 5 Gramps and 800 to 900 feet northwest of No. 4 Gramps.

Wm. E. Hughes Estate No. 6 Gramps, NW NE SE sec. 24-33n-2e (unsurveyed). Bldg. road (first report).
Wm. E. Hughes Estate No. 7 Gramps, NW NE SE sec. 24-33n-2e (unsurveyed). Bldg. road (first report).

Chart your drilling by picture with SURWEL CLINOGRAPH



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Carl D. Lindstrom No. 1 Crowley, SE SE SE sec. 3-22n-2e. M.I.M. (first report).
Oil City Pet. Co. No. 1-A Garnett ,NW NE NW sec. 25-33n-2e. S.D. 1,515 ft.; top Dakota series 1,415 ft.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW) sec. 24-33n-2e. Lowered 10-in. csg. to 205 ft.
H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. Drlg. 937 ft. in dry hole.

Baca County

The Paul R. Robb Petroleum Corp. formerly carried as Paul Robb and others, which technically spudded in two weeks ago in the Edler district, in Baca County, in the southwestern corner of Colorado, began drilling on its deep test on April 22, starting in a 19-inch hole with rotary tools to go to 4,500 feet. The 12½-inch surface pipe will be set at 300 feet. The location is on the Sierra Grande Arch and is surrounded by a block of 40,000 acres leased up originally by J. H. Everett and others, of Duncan, Okla. The block starts in the NE cor. section 24-31-47; runs west to NW cor. section 20-31-48; then south to SW cor. section 32-33-48; and thence to the beginning. The elevation is 4,585 feet.

Paul R. Robb Pet. Corp. No. 1 Lovette, NW NW NW sec. 24-32s-48w. Drlg. to 300 ft. to set 12½-in. surface pipe.

Cheyenne County

Brittel Oil Co., Inc., No. 1 Steip, C NE NW sec. 26-12s-17. Spd. and S.D. to complete rig.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. S.D. 2,275 ft. for parts.

Jefferson County

Rainbow Oil Co. No. 1 Johnson, NE sec. 30-4s-68. Drk.
Ruby Hill O. & G. Co. No. 1 Braden, SE cor. sec. 24-4n-69. Drlg. 4,425 ft.

La Plata County

McGarr Pet. Co. No. 1 Pinton Mesa, CSL NE NE sec. 34-35n-12w. Set 10-in. at 1,3[illegible] ft.; 8¼-in. at 2,790 ft.; drlg. 2,795 ft.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE sec. 7-17s-52. T.D. 1,975 ft.; running 8¼-in.; 10-in. set at 1,794 ft.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. T.D. 1,449 ft.; fshg. for parted 4¾-in.

Moffat County

Ohio Oil Co. No. 1 Robertson, C SW SW sec. 2-6n-92w. Location.
Texas Co. No. 7 Knowlton, NE cor. Lot 3, sec. 10-4n-91w. T.D. 4,557 ft.; Sundance at 4,503-57 ft.; swabbed 812 bbls. fluil (178 bbls. oil) in 24 hrs.; installing standard pump rig.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. Contracted with Perry Coon to comp.; T.D. 3,705 ft.; trying to drill by.

Park County

The discovery of oil in the South Park Oil Co. No. 1 State in the South Park district near Haswell reported last week continued the outstanding development in Colorado this week although no change in the situation was reported. After starting to flow Monday afternoon at 2 o'clock when it reached a depth of 4,159 feet, 2 feet in the Apache sand, 700 feet above the base of the Pierre shale, it continued to make heads the remainder of the afternoon and all night until valve was installed the next morning and the well shut in. No gauge was taken as there was no tankage. The crew is preparing under expert supervision to underream the 6¼-inch, which is hanging at 3,960 feet, to as close to the top of the pay at 4,157 feet as possible and then cement the string. Core-barrel will then be run to rattail into the sand before drilling any deeper. It probably will take at least five days to complete this task if all goes well, although it will be slow with the hole full of oil.

South Park Oil Co. No. 1 LeBert, NE NE NW sec. 21-11s-75w. M.I. steel rig (first report).
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. T.D. 4,160 ft.; prep. to U.R. 6¼-in.

Routt County

Mid-Colo. Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. Set 8¼-in. on bottom at 2,910 ft. in Morrison; testing W.S.O.

Washington County

Indian Territory Ill. Oil Co. and Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49w. M.I. rot. (first report).

Weld County

Continental Oil Co. No. 1 State Bank of Trenton, C SW NE sec. 21-8n-59w. M.I.M. (first report).

Yuma County

Indian Territory Ill. Oil Co. No. 1 Strangways, C NW SW sec. 21-2s-43w. M.I. rotary equipment (first report).

WYOMING

Albany County

Another structural test to the Sundance is to be drilled in Albany County, 10 miles east of the Quealy dome, where the California Co. brought in a discovery last year. The wildcat will be put down by the James Lake Oil Co. and others, in their No. 1 George & Hunt, NW NE SE section 5-17-75, on the James Lake dome. Manning & Martin, Inc., have the contract and are building derrick. It will be drilled with cable tools to around 2,000 feet and then will change over to rotary.

California Co. No. 3 Hoist, 1,650 ft. W of E line and 970 ft. N of S line, sec. 18-17n-77w. T.D. 3,295 ft.; redrlg. at 2,963 ft.
California Co. No. 1 Wilson, NW SW SW sec. 18-17n-76w. Drlg. 1,118 ft.
James Lake Oil Co. No. 1 George & Hunt, NW NE SE sec. 5-17n-75w. Bldg. derrick (first report).

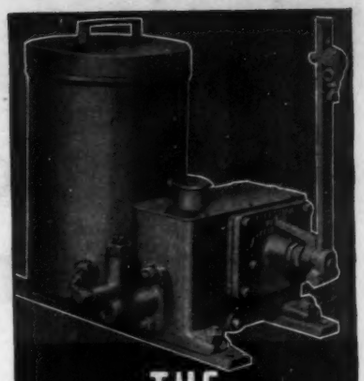
Big Horn County

W. O. Taylor and others No. 1 Hoskins, in a fault block on the southern end of the Byron structure, 1½ miles south of the nearest producer, promises to prove up an important extension of the pool. It is 12 feet in the Tensleep at 5,366 feet and is running pipe. Top of the Embar was at 5,252 feet and top of satvation at 5,269 feet. It is approximately 30 feet higher than the Ohio Oil Co. No. 4 Byron Union, which had oil in the top of the Tensleep, followed by water. The elevation on the Tensleep is approximately 1,400 feet below set level.

J. W. Bales No. 1 Parker, C SW SW sec. 23-4-89. S.D. 690 ft. for pipe.
Joan Oil Co. No. 1 Howell, Lot 63 (NW SE NE) sec. 32-55n-97w. Resuming at 1,190 ft.
Peter Evanhoff et al No. 1 McAllister, Lot 4. NW NE SE sec. 35n-87w. T.D. 2,350 ft.; C.O.
Ohio Oil Co. No. 1 Orson Vail, SW NW NE sec. 23-56n-97w. Rig; W.O. tools from No. 4 Byron Union.
Ohio Oil Co. No. 1 Robert Till, C SE SW sec. 24-56n-97w. Drlg. 2,697 ft. in shale.
Ohio Oil Co. No. 4 Byron Union, SW SW NE sec. 22-56-97. T.D. 5,735 ft.; Embar 5,587-5,710 ft.; top Tensleep at 5,710 ft.; sat. in top followed by water; P. B. to 5,719 ft.; milling on cut tubing at bottom.
Montana-Wyoming Oil Co. No. 1 Allen, 270 ft. from N line, 930 ft. from E line, Lot 52 (SE NW SE) sec. 32-56n-97w. T.D. 3,835 ft.; well out of control and on fire; contract let to Rocky Mountain Drlg. Co. for relief well, 360 ft. to east.
Peay Oil Co. No. 1 Denio, Tract 42-C, sec. 15-55n-97w. T.D. 3,890 ft.; swbg. to locate water leak in pipe.
J. H. Shaffer No. 1 Keachie, C SW SW sec. 5-49-81. T.D. 1,450 ft.; sdtrkg. tools at 1,366 ft.
Stock Oil Co. No. 1 Yates, CSL SW NE sec. 33-56n-97w. Rig.
W. O. Taylor et al No. 1 Hoskins, Lot 5 (SE SE) sec. 25-56n-97w. Csg. at 5,270 ft. in Embar; showing sat.; top Embar 5,252 ft.

Carbon County

General Pet. Corp. No. 1 Union Pacific, SW NW sec. 5-19n-83w. Spdg.
Ohio Oil Co. and California Co. No. 2 Union Pacific, C NE NE sec. 35-21n-79w. Drlg. 2,636 ft.
Ohio Oil Co. and California Co. No. 3



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Union Pacific, C NE SE sec. 22-21n-79w. Drlg. 510 ft.; cmtd. 12½-in. at 528 ft.

Ohio Oil Co. No. 9 H. & C., SW SW SW sec. 35-20n-78w. Drlg. 3,431 ft.

Ohio Oil Co. No. 1 Dixon, NE NE SE sec. 34-20n-78w. Drlg. 2,964 ft.

Ohio Oil Co. No. 2 Dixon, SE NE SE sec. 34-20n-78w. R.U. to deepen old well from 3,094 ft. to Sundance.

Union Oil Co. of California and Mutual Oil Synd. No. 1 Union Pacific, 1,890 ft. from E line and 1,320 ft. from S line, sec. 1-18-78w. S.D. 4,440 ft.

Campbell County

G. J. Sherin et al No. 1 Rhodes, NE SE C sec. 24-49n-74w. Drk. up; sump and reservoir comp. (cor. loc.).

Converse County

John Ackert No. 1 Daniels, SW SW NE sec. 17-32-71. S.D. 4,004 ft.

Chadron-Osage Oil Co. No. 1 State, SW SW SW sec. 16-32n-69w. Resuming; set 15⅝-in. at 1,500 ft.; will change to rotary at 2,500 ft.

J. A. Olson No. 1 Reese, C NE SE sec. 10-32n-65w. M.I.M. (first report).

Fremont County

The Sinclair-Wyoming Oil Co. released a location this week for a well in the Muskrat field in its No. 1 Keish, NE SW NW section 1-33-92, 1½ miles to the southeast of the discovery well.

Hot Springs County

California Exploration Co. No. 2 Government, NW SW NW sec. 4-44-9e. T.D. 4,325 ft.; 6⅝-in. at 4,137 ft.; swb. and bailing 4 bbls. water and some oil.

Ohio Oil Co. No. 73 Mill Iron Cattle Co., NE SW SE sec. 19-4n-98w. Cmtd. 15½-in. at 77 ft.

Stanolind O. & G. Co. No. 20 State-Ridgely, SE NE SE sec. 19-46n-98w. T.D. 2,931 ft.; top Embar 2,908 ft.; 6⅝-in. cmtd. 2,913 ft.; R.U.C.T.

Lincoln County

Semrab Oil Corp. No. 2 Government, CSL SE NW sec. 10-26n-113w. S.D. 1,620 ft.

Natrona County

Empire State Oil Co. No. 15, NW SE NE sec. 11-3n-83w. Drlg. 1,330 ft.

Niobrara County

The Ohio Oil Co. No. 3 Rohlff, joint with the Cow Gulch Oil Co. in the C SE NE section 32, Lance Creek field, is showing good saturation in the lower Sundance topped at 3,868 feet. It is a north offset to No. 2 Rohlff and will mark an extension of the lower Sundance pool 1,320 feet to the north. It is approximately 106 feet lower than No. 2 Rohlff and 18 feet lower than same company's No. 4 Putnam, C SW SW section 33, the most easterly of the Sundance wells. The top is 60 feet higher than Huber No. 1 Joss, the most westerly Sundance sand well in the field.

The statement in this column two weeks ago that the well drilled on the Thompson lease in section 7-35-65, by the Texas Co. a number of years ago before oil was discovered in the Sundance was a dry hole in the Dakota was incorrect. It produced gas from the Dakota for some time before it was abandoned. This lease has been taken over by the MacKinnie Oil & Drilling Co. and will be drilled to the Sundance by the J. M. Huber Corp. A well drilled to the Dakota by the Continental Oil Co. on this lease was a producer in the Dakota.

Argo Oil Co. No. 7 Elliott, C NE NW sec. 5-35n-65w. Drlg. 3,454 ft.; prep. to core.

Black Hills Ref. Co. No. 1 Mills Est., C SW NW sec. 27-36n-64w. Spudded and S.D. account of weather.

Continental Oil Co. No. 6 Rohlff, C SW SW sec. 32-36n-65w. Drlg. 518 ft.; 13⅜-in. at 237 ft.

Continental Oil Co. No. 4 Joss, 90 ft. W of C SW NE sec. 6-35n-65w. Drlg.

Lewis Gokel No. 1, SW NE sec. 31-35n-62w. Drlg. 350 ft. (first report).

J. H. Huber Co. No. 1 Jones, NE SE NW sec. 6-35n-65w. T.D. 4,096 ft.; P.B. to 4,032 ft.; pumpd. wtr. only for 3 days; made 250 bbls. fluid fourth day of which 230 bbls. was oil; testing.

Ohio Oil Co. No. 2 Agnes Rohlff, C SE NE sec. 32-36n-65w. T.D. 3,879 ft. in sat. sand; 7-in. cmtd. at 3,868 ft.

Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. Not reported; last depth 3,493 ft.

Ohio Oil Co. No. 3 Richards & Comstock, C NE SW sec. 32-36n-65w. Spudding.

S. & H. Dev. Co. No. 1-A Olinger, SE NE NW sec. 1-36-63. T.D. 1,674 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55n-85w. T.D. 3,050 ft.; fshg. lost joint 4½-in.

Weston County

One completion, a 1-bbl. pumper, was completed in the Osage field in Henry Egert No. 3 Government, CSL NW SE section 8-46-63, in sand at 334-342 feet.

Osage production for March was 22,088 bbls., and deliveries to refiners were 17,619 bbls.

Conway Oil Corp. No. 1, SE SE NE sec. 7-41n-60. Tools sidetrkd.; drlg. 2,240 ft. in red beds.

H. D. Wiltse No. 9, NW NW NE sec. 17-46n-63w. Drlg. 200 ft.

Uinta County

Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118w. Resumed at 1,000 ft. (formerly Pacific Oil Co.).

Intermountain Pet. Corp. of Utah No. 1 Union Pacific-sayes, SW NW SW sec. 24-19n-118w. Drlg. 1,575 ft.

W. D. Marshall No. 1 Government, NW SW SE sec. 12-15n-118w. S.D. 1,260 ft.

Washakie County

Ariton & Doyle No. 1 Government, SW SW SE sec. 29-48-91w. S.D. 1,115 ft.

Wyoming O. & G. Co. No. 2 Government, SW SW SW sec. 31-43-90. T.D. 1,404 ft. (cor.); fshg. for tools.

MONTANA

Montana came in for an important wildcat discovery this week on the Baker-Glendive, or Cedar Creek, structure in the eastern part of the state in a deep test drilled by the Montana-Dakota Utilities Co. It portends a big wildcat play as the anticline is 60 to 70 miles long with a number of domes superimposed on the fold. The well is located in the C NE NW section 17-4n-62e, in Fallon County, about 3 miles west of the South Dakota boundary.

It made 30 bbls. an hour on a three-fourths inch choke on the bottom with the tester seated at 6,700 feet. The gravity of the oil was reported 26 degrees.

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. Drlg. 3,229 ft.

Carbon County

Bailey Round Butte Oil Co. No. 1, NW NE SE sec. 3-6s-23e. T.D. 1,551 ft.; chg. over to rotary.

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. Drlg. 2,910 ft.

Judith Operating Co. No. 2 Government, NW NE sec. 35-22n-17e. Drlg. 501 ft.

H. C. Rowland No. 3 Government, CEL NE SW sec. 18-17n-24e. Spudding 50 ft. (first report).

Kalispel-Kevin Oil Co. No. 3 Emmons, C SW SE sec. 20-21-18e. Drlg. 576 ft.

Glacier County

Four completions and four new operations were reported in the Cut Bank field. Santa Rita Oil & Gas Co. No. 1 Corey, NE NW SE section 5-32-5w, in the southern part of the field, swabbed 50 bbls. the first 48 hours from the pay at 2,935-60 feet, which is also the total depth. The elevation is 3,788 feet.

Nadeau Brothers No. 1 Tribal, C Lot 4, section 6-32-5w, swabbed 65 bbls. the first day at a total depth of 3,016 feet. The pay was at 2,990-3,014 feet and the elevation is 3,721 feet.

R. C. Tarrant No. 7 Haglund, Jr., C SW SW section 13-34-6w, swabbed 60 bbls. the first 24 hours at 2,879 feet. The Cut Bank was at 2,830-75 feet.

Fowler and others No. 1 Tweedy, which swabbed 85 bbls. per day last December, but upon which completion has been delayed, swabbed 108 bbls. in 12 hours. No samples were taken. Total depth is 2,826 feet.

R. C. Tarrant No. 2 State, C NE SE section 36-34-6w, which showed for a small well and reported a completion two weeks ago, has been plugged and abandoned. Total depth, 2,920 feet. It had 150 feet of fluid in the hole before testing.

Anderson et al No. 3 Anderson, NE SW NW sec. 26-35n-6w. Drlg. 2,210 ft.

A. B. Cobb No. 5 Walberger, C NE NE sec. 35-36n-6w. Rig

Cobb-Pardee No. 2 Morrison, CEL NE SE sec. 24-33n-6w. Rig (cor. loc.).

Cobb-Pardee No. 1 Stufft, C SE NW sec. 25-36n-6w. Drlg. 2,530 ft.; 8¼-in. at 2,520 ft.

Consol. Gas Co. No. 1 Allotted-114, CNL NE SW sec. 31-33n-5w. Bldg. rig (form. J. W. Johnson).

A. E. Crumley No. 1 Tribal, C SW SE sec. 31-33n-5w. Drlg. 2,650 ft.

Dakota-Montana Oil Co. No. 1 Winkler, SW NE NW sec. 36-35n-6w. Drlg. 900 ft.; 10-in. at 558 ft.

Gardner et al No. 1 Cole, C NE SW sec. 2-32n-6w. S.D. 2,220 ft.

Goodman Oil Co. No. 1 Tribal, SW NW SW sec. 25-33n-6w. 10-in. cmtd. at 636 ft.; Colo. at 611 ft.

Hannah-Porter Co. No. 1 Allotted-130, C Lot 3, sec. 6-32n-5w. Cellar and sump (first report).

B. V. Hole No. 1 Tribal, C NW SW sec. 33n-6w. Cellar (first report).

B. V. Hole No. 1 Allotted-124, 640 ft. out of NE cor. sec. 1-32n-6w. Loc. (first report).

L. P. Jackson et al No. 1 Tribal, NW SE NW sec. 23-34n-7w. Drlg. 723 ft.

R. C. Jeffries No. 4-A Lukens, NE NE NE sec. 12-33n-6w. Drlg. 375 ft.

R. C. Jeffries No. 4 Lukens, NE NE NE sec. 12-33n-6w. Abd.; junked hole at 2,610 ft.; skidded rig.

Jack Marshall No. 1 Tribal-120, Lot 7, sec. 7-32n-5w. T.D. 2,915 ft.; fshg.

Kately No. 3 Drumheller-Ward, C Lot 2, sec. 10-34n-6w. Top Colo. 550 ft.; 10-in. cmtd. at 572 ft. (first report).

Montana Headlight Oil Co. No. 3 Gritton, NE NE SE sec. 11-34n-6w. Drlg. 980 ft.

Montana Power Gas Co. No. 2 Van Ormer, C SE SE sec. 3-33n-5w. Spdg. 100 ft.

Montana Power Gas Co. No. 1 Warfield unit, CWL SW sec. 9-33n-5w. Spdg. 100 ft.

Montana Power Gas Co. No. 1 Carrigeaux, 125 ft. W of C NE NW sec. 28-33n-5w. Bldg. rig (first report).

Nadeau Bros. No. 3 Farmers State Bank, C SW NE sec. 17-33n-5w. Spdg. 135 ft.

Par Oil Co. No. 6 Haines, NE SW NE sec. 3-34-6w. T.D. 2,520 ft.; fshg. tools.

Santa Rita O. & G. Co. No. 7 Tribal, 1,980 ft. S of N line, 1,320 ft. W of E line, sec. 16-35n-6w. Drlg. in at 2,985 ft.

Santa Rita O. & G. Co. No. 1 Shearon, 660 ft. S of N line and 349 ft. W of E line, sec. 34-36n-6w. T.D. 3,092 ft.; running 7-in. to 2,927 ft.; will U.R.

Santa Rita O. & G. Co. No. 1 Barrington, SE SW NW sec. 24-33n-6w. Drlg. 1,975 ft.

Neil Spencer No. 2 Tweedy, 925 ft. NS line, 1,980 ft. 2 WL SE sec. 25-33n-6w. Spdg. 250 ft.

R. C. Tarrant No. 6 Britton, C SE SW sec. 12-34n-6w. Rig.

R. C. Tarrant No. 2 Reikhoff, SE NE SE sec. 3-34n-6w. Drlg. 950 ft.; Colo. 570 ft.; 10-in. 590 ft.

Texas Co. No. 2-B Tribal, SE NW NW sec. 6-32n-5w. R.U.R.

Texas Co. No. 1 Marie Jones, C NW SW sec. 6-33n-5w. Drlg. 2,810 ft.

Texas Co. No. 1 Walker, C NE NE sec. 2-35n-6w. T.D. 2,945 ft.; 7-in. cmtd.

Texas Co. No. 1-B Tribal, Lot 4, 1,300 ft. from W line, 200 ft. from S line, sec. 32-33n-5w. T.D. 2,745 ft.; 7-in. cmtd., M.I. spudder.

Texas Co. No. 1-A Tribal, C SW NE sec. 26-33n-6w. Drlg. 2,685 ft.; Colo. 650 ft.

Whetstone et al No. 1 Tribal, C SE NW sec. 26-33n-6w. Drlg. 2,150 ft.

Wilkinson et al No. 1 Tribal, Tr. 127, C NE NE sec. 1-32n-6w. M.I.M.

Wilkinson et al No. 1 Tribal, Tr. 15, C NE NW sec. 7-32n-5w. Bldg. rig.

Petroleum County

West Dome Oil Co. No. 1, SW SE NE sec. 9-15n-29e. Drlg. 1,293 ft.; first Cat Creek at 1,240-88 ft.; (est. 5 bbls.); cased off with 5 3/16-in. at 1,290 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. Drlg. 431 ft.

Pondera County

Wm. M. Fulton No. 1 Price, SW NE NE sec. 18-27-4w. T.D. 1,710 ft. (cor.); drlg. by tools.

Norden Corp., Ltd., No. 1 Hollan, NW SW NW sec. 12-28-6w. Drlg. 490 ft.

Warren Hastings No. 2 Erickson, NW SW NW sec. 10-27n-4w. R.U.

Texas Co. No. 1 Valier Unit No. 1, C NW SE sec. 32-31n-5w. Stdg.; drlg. wtr. well.

Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. R.U.

Jones-Chambers No. 1 Erickson, SW SE SW sec. 3-27n-4w. Rig timbers on loc.

Toole County

A. E. Crumley No. 2 Shaw, SE NW SE sec. 35-36n-2w. T.D. 1,520 ft.; rng. 6¼-in.

Agen & Goeddertz No. 1, C SE NE sec. 16-35n-3w. Loc.

Big West Oil Co. No. 1 Daiquist, SW NE NW sec. 21-35n-3w. Loc.

Carscallen & Mitchener No. 1 Krueger, 1,320 ft. W of E line, 1,980 ft. S of N line, sec. 10-34n-2w. T.D. 1,650 ft.; prep. to acidize.

Coolidge & Coolidge No. 1 State, NW NW NW sec. 36-36n-2w. Drlg. 700 ft.

Continental Oil Co. No. 7 State, SE NE NE sec. 16-35n-2w. Loc.

Continental Oil Co. No. 8 State, NE SE NE sec. 16-35n-2w. Loc.

Continental Oil Co. No. 9 State, SE SW NE sec. 16-35n-2w. Loc.

Eddy & Engleking No. 1 Sohn, SW SW NE sec. 26-35n-3w. T.D. 900 ft.; fsg.

Fraser & Smith No. 1 Crabtree, NE NE SE sec. 14-34n-2w. Drlg. 140 ft.

Fraser & Smith No. 1 Crabtree, NE NE SE sec. 14-34n-2w. Spdg. 100 ft.

Monopeg Oils, Ltd., No. 3 Dipple, CSL SW NW sec. 28-35n-1w. T.D. 1,450 ft.; R.U. to drill in.

Burt Smith No. 1 Engel, SE SE NE sec. 2-35n-3w. Drlg. 400 ft.

Welch Bros. No. 1 Dewald, SW NE NE sec. 26-35n-2w. Drlg. 290 ft.

UTAH

Grand County

Columbia Crude Co. No. 1 Rath, SW SE sec. 12-25n-20e. Drlg. 230 ft.

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22e. Drlg. 4,508 ft.

Glenn Ruby et al No. 1 State, NE SE SE sec. 34-31s-16e. Drlg. 1,509 ft. in Chinlee sh.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 16-8s-5e. S.D. 3,951 ft.; rebldg. road after landslide.

Gulf Coast Fields

(Continued from Page 56)

total depth, and flowed 298 bbls. of pipe line oil in 10 hours through a quarter-inch choke with tubing pressure 1,500 pounds and casing pressure 1,300 pounds. The company's No. 1 Adras Young in the same section is bottomed in oil sand at 8,318 feet and casing is being run to bottom preparatory to testing through perforations.

Fohs Oil Co. No. 1 Frost, midway between the two producing areas of the Gillis field, Calcasieu Parish, has apparently connected the two areas, due to a favorable drill stem test made in a shallow sand from 5,257-67 feet, which showed 37 stands of oil with no salt water and 200 pounds of pressure. Two previous tests made at this depth showed oil, gas and salt water and the hole was drilled to a depth of 7,650 feet and then plugged back to its present depth. If the well is completed for a commercial producer, it will give the field three producing horizons, two being at approximately 6,700 and 7,000 feet respectively.

Another producer for the Cheneyville field, Rapides Parish, was Texas Co. No. 2 Weil which flowed 240 bbls. per day through a quarter-inch choke with tubing pressure 600 pounds. Production is from the Cockfield sand bottomed at 5,732 feet. Seven-inch casing was cemented at 5,716 feet. It is in section 53-15s-2e. Amerada Petroleum Corp. No. 3 Weil, 990 feet south of No. 1, topped oil sand at 5,715 feet and cored to 5,719 feet, total depth.

Another producer was added to the Jeanerette field, St. Mary Parish, by completion of Herton Oil Co. No. 3 Roanes. Bottomed in oil sand at 6,688 feet, it was completed for an initial production of 36 bbls. per hour through a five-sixteenths inch choke with tubing pressure 1,000 pounds and casing pressure 1,025 pounds. Locations were made by the company for No. 2 and 3 Banta, No. 2 is 825 feet south and 1,097 feet west of No. 2 Roanes in section 40 and No. 3 960 feet west of No. 1 Roanes in section 40.

At the St. Martinsville field, St. Martin Parish, Tide Water Oil Co. No. 2 Smedes tested salt water on a drill stem test from 6,820-24 feet and has been plugged back the third time to 6,650 feet where it will be tested again.

North Louisiana, Arkansas

OUACHITA COUNTY DEEP TEST PROVES GLEN ROSE PRODUCER

By J. R. CRUMPTON

SHREVEPORT, La., Apr. 27.—The South Arkansas district came into the limelight during the past week, sharing with Northwest Louisiana the distinction of producing from Oolitic lime of the Glen Rose series in the upper Trinity. Phillips Petroleum Co. No. 1 J. D. Reynolds, section 27-15-15, Ouachita County, tested 13,390,000 feet of gas and 68 bbls. of distillate during a one-hour gauge from 10 feet of Oolitic lime with the hole bottomed at 4,906 feet. The well flowed through eleven-sixteenths inch choke on tubing, tubing pressure registering 825 pounds and casing pressure 1,480 pounds. It is the first deep production below the Woodbine horizon in the state and is approximately 1,500 feet below any of the old producing horizons. Operators of the test will deepen in an effort to make an oiler of it.

The well is located in the Ouachita County area of the Smackover field, and is the third test on the flanks of this prolific low gravity field to be drilled within the last few years to deeper levels. Lion Oil Refining Co. junked a hole in rock salt below the 7,000-foot level about three years ago and Gulf Refining Co. drilled through the deep seated salt dome with no results last year. The Phillips well has caused a flurry of leasing activities in that area extending for several miles and into the Counties of Union, Calhoun and Ouachita. The location of the test was made as a result of seismograph survey and will evidently result in increased wildcatting to this Glen Rose horizon, particularly to the southwest and south. Columbia County, just north of the Louisiana line, has been extensively surveyed geophysically and a number of wildcat tests are being proposed.

Another deep test in the Southwest Arkansas area that is being closely watched is Erwin & Leach No. 3 Bodcaw Lumber Co., section 20-16-23, Lafayette County, in the vicinity of the town of Stamps. The test is drilling at 6,100 feet. Joe Modisett No. 1 Red River Lumber Co., section 21-19-24, southeast of the Bradley field, Lafayette County, is drilling plug after setting 7-inch casing at 5,301 feet.

Other Arkansas wildcats follow: Dallas County, Kel-Mac Lease & Royalty Co., section 26-10-16, tested salt water and shut down at 1,580 feet; Lafayette County, Transportation Petroleum Co. No. 1 Cockran, section 26-19-25, stands temporarily abandoned after testing salt water at 3,675 feet; Miller County, C. V. Lenz No. 7 Dale, section 24-15-26, coring a likely looking oil sand at 2,856 feet. Most of the drilling operations in Union County are centered around the Rainbow and Urbana fields. Don R. Keever is rigging up to drill No. 1 Slaughter, in the southern part of the parish on what is proposed to be a 5,000-foot test.

North Louisiana

The outstanding disappointment in the North Louisiana district was the failure of Arkansas-Louisiana Gas Co. No. 1 C. E. Causey, section 32-19-2w, Lincoln Parish. The wildcat, located a short distance northeast of the town of Ruston and about 7 miles northeast of the recently discovered gas area near Simmsboro, was abandoned as a dry hole at 4,687 feet. Top of contacts follow: Blossom sand, 2,856 feet, red beds 3,375 feet, lower Cretaceous 3,568 massive anhydrites 4,154 feet with base at 4,335 feet. The test definitely closes the play to the northeast of the newly discovered Oolitic lime gas field. The second gasser in the district was brought in about 7 miles southwest of the original well, extending production over into Bienville Parish, and was contacted around 550 feet farther into the lime. The second dry test of the week was in the Lake Bisteneau area of Bienville Parish on the western edge of the parish near the intersection of the Webster and Bossier Parish lines. DeSoto Oil & Gas Co. No. 1 C. R. Mower, section 9-16-10, was dry and abandoned at 3,050 feet.

Rodessa Field

The Rodessa field in the northwestern part of Caddo Parish and in the extreme northwestern part of the state continues to hold the spotlight in this district. The field reported nine completions during the past seven days. Haynes Production Co. No. 11 Lawton, section 14-23-16, in the hot spot of production, made 147 bbls. per hour through 1¾-inch tubing choke from total depth of 6,012 feet. Tubing pressure registered 1,000 pounds and casing pressure 500 pounds. Some of the tests on the updip toward the gas trend, particularly some of those within the Rodessa Townsite are failing to make good producers.

Lyons & Neely No. 1 Blaxton, section 23-23-16, a townsite well, made 8,000,000 feet of gas and 8 bbls. of distillate per hour through one-fourth inch tubing choke from 6,008 feet. Tubing and casing pressure registered 1,500 pounds. M. H. Marr No. 1 Peak, section 11-23-16, gauged 45 bbls. per hour through one-half inch tubing choke from 6,040 feet, tubing pressure registering 600 pounds and casing pressure 800 pounds. Top of saturated lime was logged at 6,036 feet.

United Gas Public Service Co. completed six wells as follows: No. 6 Ardis & Co., section 14-23-16, 57 bbls. per hour, from 6,037 feet, top of saturation at 6,010 feet; No. 2 M. Pitts unit, section 13-23-16, 17 bbls. per hour through one-fourth inch choke on tubing from 6,068 feet, tubing pressure 1,950 pounds and casing pressure 2,000 pounds; No. 3 M. L. Pitts unit, section 13-23-16, flowed only 5 bbls. per hour through one-eighth inch choke on tubing from total depth of 6,050 feet, with casing perforated at 6,042 feet, tubing pressure registering 1,175 pounds and casing pressure 2,100 pounds; No. 15 Rodessa Oil & Land Co., section 22-23-16, is a 69-bbl. per hour gusher from 6,016 feet; No. 8 Tyson unit, section 13-23-16, gauged 16 bbls. per hour through one-quarter inch tubing choke from 6,045 feet, and No. 9 Tyson unit, section 14-23-16, made 55 bbls. per hour through one-half inch tubing choke from 6,032 feet. Seven-inch casing was set in the latter at 5,980 feet and top of saturated lime logged at 6,000 feet.

Monroe Field

The Morehouse and Union Parish areas of the old Monroe field continue to report several gassers each week. In the former, United Gas Public Service Co. No. 35 Crossett, section 22-21-4e, had an initial flow of 5,000,000 feet of dry gas and 850 pounds rock pressure from 2,161 feet. In the Union Parish area, J. E. Farrell No. 14 State, section 33-21-4e, gauged 7,000,000 feet, 840 pounds rock pressure from 2,136 feet, and Interstate Natural Gas Co. No. 45 fee, section 12-20-3e, made 4,500,000 feet, 775 pounds pressure from 2,169 feet.

J. P. Evans No. 1 Crichton, section 35-18-9, in the Dubberly area, southern part of Webster Parish, topped massive anhydrites at 4,950 feet and is coring for lime around the 5,200-foot level. This well is located on a geophysical high, and adjoining a block of about 9,000 acres recently assembled by the Standard Oil Co. of Louisiana. It is contracted to drill 300 feet into the Oolitic lime. Ohio Oil Co. No. 1 R. L. Holloway, section 23-21-10, a deep test in the Cotton Valley field in the northern part of Webster Parish, failed to get the anticipated pay sand around the 7,006-foot level that was reported cored in a test a few years ago drilled by Magnolia Petroleum Co. The test, however, is scheduled to drill to 10,000 feet and is drilling and coring ahead.

Two deep tests in the Sugar Creek field, Claiborne Parish, should get some results within the next seven days. Triangle Drilling Co., discoverers of Oolitic lime gas in the field, is drilling at 5,480 feet in its No. 1 Kilpatrick, section 7-19-5. It is an old gas well being drilled deeper in search of oil. United Gas Public Service Co. No. 2 Darrett, section 31-20-5, Sugar Creek, is coring sandy lime at 6,423 feet. This well is being drilled jointly by the United Gas, Standard Oil Co. of Louisiana and Triangle Drilling Co. A deep test in the old Spider field area of DeSoto Parish, Larkin & Waar No. 1 Jackson, section 1-11-14, topped anhydrites at 4,670 feet, massive anhydrites at 4,915 feet with the base at 4,998 feet. Base of stinger anhydrites was logged at 5,104 feet. The test flowed salt water with drill stem out of the hole and is coring ahead at 5,163 feet.

Cass County

American Liberty Oil Co. No. 1 Marcus Rembo, J. H. Reeves Survey, about 5 miles southwest of production in Cass County is being eagerly watched as a possible extension of the Rodessa field in that direction. The test topped anhydrites at 5,019 feet, top of massive anhydrites at 5,292 feet, base at 5,530 feet and is coring for lime at 5,685 feet. Other Cass County tests on the southwest trend of Rodessa follow: American Liberty Oil Co. No. 2 Maxie, John Collum Survey, topped chalk rock at 1,989 feet, set 10¾-inch casing at 1,955 feet and drilling at 3,680 feet. Number 3 Maxie, John Collum Survey, set 16-inch surface casing at 221 feet and subsurface 10¾-inch casing at 2,020 feet. McIlvane and others No. 1 Beckett, John Collum Survey, set 16-inch at 230 feet and 10¾-inch at 1,991 feet. R. W. Norton No. 2 Haywood, Priscilla Evans Survey, set 13⅜-inch at 219 feet and 9⅝-inch at 2,097 feet. The same operators No. 2 Mary Rives, John Collum Survey, is coring at 6,003 feet.

Estimated Production

Estimated daily gross production all companies week ending April 24, 1936:

NORTH LOUISIANA

Bellevue	440
Caddo Light	4,010
Caddo Heavy	2,405
Converse	1,110
Cotton Valley	425
DeSoto and Red River	1,295
Elm Grove	470
Haynesville	3,420
Holly	145
Homer	2,665
Pleasant Hill	165
Rodessa	47,095
Sarepta-Carterville	500
Urania	2,850
Zwolle	1,320
Total	68,315

SOUTH ARKANSAS

Champagnolle	3,260
El Dorado	2,080
Lisbon	290
Miller County	1,610
Nevada	850
Smackover Light	2,125
Smackover Heavy	17,650
Stephens	565
Urbana	2,000
Total	29,830

Texas side Rodessa field 1,765 bbls. daily.

John C. Arthurs, pioneer drilling contractor in Michigan fields, is recovering from a serious attack of bronchial pneumonia in a Mount Pleasant, Mich., hospital.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 11 Capitan, Santa Barbara Co.	32- 5-30	2,789	Sespe dry
Shell Oil Co., No. 12 Capitan, Santa Barbara Co.	32- 5-30	2,600	completing
Honolulu Oil Corp., No. 9 Elwood, Santa Barbara Co.	tideland	7,014	P.B. 6,700
Barnsdall-Rio Grande, No. 9-B Elwood, Santa Barbara	tideland	3,725	flow, 1,170 b.d.
Barnsdall-Rio Grande, No. 13 Elwood, Santa Barbara	15- 4-29	3,506	fish. D.P.
Pacific Western Oil, No. 4 Elwood, Santa Barbara	tideland	3,735	flow, 610 b.d.
Signal Oil Co., No. 7 Elwood, Santa Barbara Co.	tideland	3,757	flow, 697 b.d.
York Oil Co., No. 3 Lompoc, Santa Barbara Co.	32- 8-34	....	bldg. rig
Union Oil Co., No. 16 Orcutt, Santa Barbara Co.	26- 9-34	2,775	sd. sh. drig.
Fairview Oil Co., No. 1 Purisima, Santa Brabara Co.	12- 7-34	4,060	fish. D.P.
Santa Barbara Oil, No 1 Carpinteria, Santa Barbara	29- 4-25	2,290	P.B. 1,950
Cornero, Tony, No. 1 Carpinteria, Santa Barbara Co.	8- 4-25	653	sd. sh. drig.
Bankline Oil, No. 1 Coal Oil Pit, Santa Barbara Co.	tideland	5,510	P.B. 3,533
Union Oil Co., No. 1 Sudden, Santa Barbara Co.	10- 5-35	2,228	dry; abd.
Anacapa Oil Co., No. 4 Mesa, Santa Barbara Co.	28- 4-27	961	sd. sh. drig.
Calco Pet. Co., No. 1 Las Posas, Ventura Co.	17- 3-20	3,110	sd. sh. drig.
Union Oil Co. No. 10 Bardsdale, Ventura Co.	12- 3-20	6,055	swabbing
Bankline Oil Co., No. 1 Sespe, Ventura Co.	36- 5-20	2,882	br. sh. drig.
Ivers, H. A., No. 12 Sespe, Ventura Co.	1- 4-20	1,757	cleaning out
Wasibi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	....	rigging up
Laing & Jacobs, No. 1 Shiells Canyon, Ventura Co.	32- 4-19	1,275	repair mach.
El Rancho Oil Co., No. 1 Shiells Canyon, Ventura Co.	9- 3-19	4,041	bailing
Bestco Pet. Co., No. 1 Shiells Canyon, Ventura Co.	2- 3-19	1,751	hd. sd. drig.
Bankline Oil Co., No. 1 Shiells Canyon, Ventura Co.	3- 3-19	4,163	sd. sh. drig.
Petroleum Securities, No. 1 Shiells Canyon, Ventura	3- 3-19	1,994	hd. sh. drig.
Texas Co. No. 129 Shiells Canyon, Ventura Co.	4- 3-19	4,812	will deviate
Hull, James, No. 1 Santa Susana, Ventura Co.	2- 2-18	1,791	hd. sd. drig.
Bolsa Chica Oil Co., No. 3 Temescal, Ventura Co.	4- 4-18	1,397	br. sh. drig.
Johnson, R. P., No. 1 Temescal, Ventura Co.	21- 4-18	1,672	sd. sh. drig.
General Pet. Corp., No. 2 Oxnard, Ventura Co.	26- 2-23	5,597	sd. sh. drig.
Rincon Oil Co., No. 2 Rincon, Ventura Co.	tideland	1,551	sd. sh. drig.
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	1,897	sd. sh. drig.
C. C. M. Oil Co., No. 1 Javon, Ventura Co.	15- 3-24	....	bldg. rig.
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-26	6,314	redrig. 6,196
Richfield Oil Co., No. 2 Devil's Den, Kern Co	14-25-18	2,501	cleaning out
Calcrude Pet. Co., No. 1 McKittrick, Kern Co.	34-30-22	791	sd. sh. drig.
Franco-Western Oil Co., No. 12 McKittrick, Kern Co.	2-30-22	2,300	pump. 290 b.d.
Bergman Oil Co., No. 1 McKittrick, Kern Co.	32-29-22	....	rigged up
Welport Oil Co., No. 14 McKittrick, Kern Co.	33- 5-19	....	rigging up
Standard Oil Co., No. 4 North Belridge, Kern Co.	36-27-20	6,391	br. sh. drig.
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	5,751	cleaning out
Belridge Oil Co., No. 18-35 North Belridge, Kern Co.	35-27-20	5,383	cmtd. 5,351
Belridge Oil Co., No. 4-1 North Belridge, Kern Co.	1-28-28	8,099	O.S. drig.
Belridge Oil Co., No. 17-35 North Belridge, Kern Co.	35-27-20	5,519	cleaning out
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,492	P.B. 9,340
Union Oil Co., No. 21 North Belridge, Kern Co.	36-27-20	4,895	sd. sh. drig.
Continental Oil Co., No. 7 North Belridge, Kern Co.	36-27-20	7,251	hd. sh. drig.
Alford, J. W., No. 1 Delano, Kern Co.	14-25-27	2,440	dry; abd.
C. C. M. Oil Co., No. 16 Kern Front, Kern Co.	23-28-27	2,184	pump 124 b.d.
Republic Pet. Co., No. 8 Kern Front, Kern Co.	11-28-27	1,951	pubp. 135 b.d.
Republic Pet. Co., No. 10 Kern Front, Kern Co.	14-28-27	....	bldg. rig
L. & H. Prop., Inc., No. 1 Kern Front, Kern Co.	13-28-27	....	bldg. rig
General Pet. Corp., No. 5 Kern Front, Kern Co.	14-28-27	2,130	pump. 108 b.d.
Kern River Oilfields, No. 7 Kern Front, Kern Co.	25-28-27	2,045	rig to pump
Associated Oil Co., No. 6 Kern Front, Kern Co.	4-28-27	2,840	P.B. 2,630
Standard Oil Co., No. 12 Kern Front, Kern Co.	9-28-27	2,853	O.S. drig.
Standard Oil Co., No. 13 Kern Front, Kern Co.	24-28-27	2,014	rig to pump
Texas Co., No. 15 Kern Front, Kern Co.	23-28-27	2,560	P.B. 2,180
Union Oil Co., No. 8 Kern Front, Kern Co.	11-28-27	311	sd. sh. drig.
Ausbrit Oil Co., No. 1 Premier, Kern Co.	26-27-27	2,139	cleaning out
Unger, M., No. 1 Dominion, Kern Co.	27-24-28	1,355	gr. sd. drig.
Santa Clara Oil Co., No. 1 Mount Poso, Kern Co.	7-26-28	1,850	gr. sd. drig.
McMahan, Hugh, No. 1 Mount Poso, Kern Co.	27-26-28	1,581	P.B. 1,443
Vanguard Oil Co., No. 4 Mount Poso, Kern Co.	33-27-28	1,778	O.S. drig.
Cal-Coast-Apex Oil Co., No. 1 Mount Poso, Kern Co.	34-26-27	657	sd. sh. drig.
General Pet. Corp., No. 13 Mount Poso Helsen, Kern	14-27-28	....	bldg. rig
Tilton & Harp, No. 1 Mount Poso, Kern Co.	6-27-28	....	rigging up
Union Oil Co., No. 1 Poso Outpost, Kern Co.	34-27-28	1,500	sd. sh. drig.
Dixie Lee Oil Co., No. 2 Fruitvale, Kern Co.	23-29-27	1,755	sd. sh. drig.
Connelly, T. E., No. 1 Fruitvale, Kern Co.	21-29-27	....	rigging up
Moschbach Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	....	rigged up
Mayo, Luther, No. 1 Fruitvale, Kern Co.	21-29-27	4,094	pump. 170 b.d.
Magnet Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,049	cmtd. 3,985
Western Gulf Oil Co., No. 22 Fruitvale, Kern Co.	22-29-27	3,875	flow. 344 b.d.
Western Gulf Oil Co., No. 23 Fruitvale, Kern Co.	27-29-27	3,445	recmtd. 3,400
Western Gulf Oil Co., No. 25 Fruitvale, Kern Co.	27-29-27	....	rigging up
Mohawk Oil Co., No. 10 Fruitvale, Kern Co.	28-29-27	3,780	reaming
Hogan Pet. Co., No. 12 Mountain View, Kern Co.	32-30-29	5,681	sd. sh. drig.
Hogan Pet. Co., No. 13 Mountain View, Kern Co.	32-30-29	4,260	sd. sh. drig.
Hogan Pet. Co., No. 14 Mountain View, Kern Co.	32-30-29	....	rigging up
Buffalo Oil Co., No. 3 Mountain View, Kern Co.	19-30-29	761	sd. sh. drig.
Mohawk Oil Co., No. 16 Mountain View, Kern Co.	30-30-29	6,055	C.P. 5,985
Mohawk Oil Co., No. 18 Mountain View, Kern Co.	30-30-29	5,621	O.S. drig.
Mohawk Oil Co., No. 19 Mountain View, Kern Co.	30-30-29	....	rigging up
Ohio Oil Co., No. 3 Mountain View, Kern Co.	33-30-29	5,860	cmtd. 5,067
Allied Pet. Corp., No. 1 Mountain View, Kern Co.	19-30-29	5,165	redrig. 4,675
Union Oil Co., No. 5 Mountain View, Kern Co.	23-30-28	5,622	will P.B.
Hancock Oil Co., No. 10 Mountain View, Kern Co.	14-30-28	....	grading
Treasure Oil Co., No. 1 Mountain View, Kern Co.	13-30-28	1,751	sd. sh. drig.
Shell Oil Co., No. 8 Mountain View, Kern Co.	32-30-29	5,818	awbg.
Shell Oil Co., No. 9 Mountain View, Kern Co.	32-30-29	5,996	cleaning out
Shell Oil Co., No. 10 Mountain View, Kern Co.	32-30-29	5,940	cmtd. 5,700
Shell Oil Co., No. 11 Mountain View, Kern Co.	32-30-29	....	rigged up
Standard Oil Co., No. 24 Mountain View, Kern Co.	13-30-28	5,188	pump. 170 b.d.
Standard Oil Co., No. 26 Mountain View, Kern Co.	13-30-28	3,754	sd. sh. drig.
Mountain View Oil Co., No. 1 Mountain View, Kern	25-30-28	5,814	cleaning out
Ohio Oil Co., No. 1 Rio Bravo, Kern Co.	1-30-25	5,758	dry; abd.
Shell Oil Co., No. 1 Stevens, Kern Co.	29-30-26	7,898	sd. sh. drig.
Helm & Pruitt, No. 1 Round Mountain, Kern Co.	17-28-29	2,175	redrig. 1,463
Round Mountain Oil, No. 2 Round Mountain, Kern	19-28-29	1,895	cmtd.
Shell Oil Co., No. 4 Round Mountain, Kern Co.	7-28-29	1,864	sd. sh. drig.
Shell Oil Co., No. 5 Round Mountain, Kern Co.	7-28-29	....	rigging up
Shell Oil Co., No. 6 Round Mountain, Kern Co.	7-28-29	....	bldg. rig
Honolulu Oil Corp., No. 16 Round Mountain, Kern	18-28-29	1,820	sd. sh. drig.
Honolulu Oil Corp., No. 17 Round Mountain, Kern	20-28-29	....	bldg. rig
M. & L. Oil Co., No. 1 Edison, Kern Co.	23-30-29	2,048	cmtd. 1,787
Jergins Trust, No. 22 Edison, Kern Co.	22-30-29	3,941	sd. sh. drig.
Jergins Trust, No. 23 Edison, Kern Co.	22-30-29	3,287	P.B. 2,675
Buckeye Union Oil Co., No. 1 Edsion, Kern Co.	22-30-29	4,115	hd. sh. drig.
Whittier-Santa Fe Oil Co., No. 1 Edison, Kern Co.	21-30-29	3,279	bailing
Higgins, W. F., No. 1 Edison, Kern Co.	17-30-29	....	bldg. rig
Monterey Expl. Co., No. 5 Edison, Kern Co.	14-30-29	2,699	P.B. 2,306
General Pet., No. 14 Edison, Kern Co.	24-30-29	1,458	recmtd. 1,370
General Pet., No. 16 Edison, Kern Co.	10-30-29	....	rigging up
General Pet., No. 17 Edison, Kern Co.	21-30-29	....	rigging up
General Pet. Corp., No. 1 Elk Hills, Kern Co.	5-30-24	6,149	P.B. 6,050
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	151	port. outfit
Gibson Oil Co., No. 2 Maricopa, Kern Co.	6-11-23	2,392	will redrl.
Gibson Oil Co., No. 4 Maricopa, Kern Co.	6-11-23	2,832	sd. sh. drig.
Chief Oil Co., No. 2 Maricopa, Kern Co.	6-11-23	2,472	redrig. 2,336
General Pet. Corp., No 1 Maricopa, Kern Co.	6-11-23	2,827	recmtd. 2,611
Shell Oil Co., No. 1 Maricopa, Kern Co.	7-11-23	....	bldg. rig
Standard Oil Co., No. 24 Midway-Sunset, Kern Co.	26-12-24	2,476	sd. sh. drig.
Standard Oil Co., No. 25 Midway-Sunset, Kern Co.	26-12-24	2,106	cleaning out
Standard Oil Co., No. 30 Midway-Sunset, Kern Co.	31-12-23	....	bldg. rig
Standard Oil Co., No. 45 Midway-Sunset, Kern Co.	36-12-24	1,986	br. sh. drig.
Standard Oil Co., No. 54 Midway-Sunset, Kern Co.	31-12-24	2,896	gr. sh. drig.
Standard Oil Co., No. 219 Midway-Sunset, Kern Co.	25-32-24	....	bldg. rig
Quality Oil Co., No. 2 Midway-Sunset, Kern Co.	22-32-23	954	sd. sh. drig.
Alford Oil Co., No. 5 Maricopa, Kern Co.	4-32-23	....	rigging up
McAdams, Ed., No. 1 Midway-Sunset, Kern Co.	23-32-23	1,242	sd. sh. drig.
Obispo Oil Co., No. 12 Midway-Sunset, Kern Co.	32-12-23	....	rigging up
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	31-12-23	3,951	br. sh. drig.
Evans, H. B., No. 12 Midway, Kern Co.	35-32-23	1,890	pump. 90 b.d.
Ohio Oil Co., No. 6 Buena Vista Lake, Kern Co.	33-31-26	4,676	form. test
Superior Oil Co., No. 1 Buena Vista Lake, Kern Co.	6-32-25	4,900	redrig. 1,480
Ohio Oil Co., No. 1 Tejon, Kern Co.	36-11-19	....	bldg. rig
Reserve Oil Co., No. 1 Tejon, Kern Co.	33-11-19	6,032	P.B. 4,805
Signal Oil Co., No. 1 Comanche, Kern Co.	36-32-30	....	bldg. rig
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-29	2,397	sd. sh. drig.
Seaboard Oil Co., No. 4 Huron, Fresno Co.	10-16-13	3,451	gr. sh. drig.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	1,752	sd. sh. drig.
Conlon, J. M., No. 1 Coalinga, Fresno Co.	30-19-15	881	sd. sh. drig.
Standard Oil Co., No. 1 South Coalinga, Fresno Co.	26-21-14	517	sd. sh. drig.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	P.B. 10,729
K. N. D. A., No. 2 Kettleman North, Fresno Co.	20-21-17	7,174	sd. sh. drig.
K. N. D. A., No. 74 Kettleman North, Fresno Co.	30-21-17	4,861	sd. sh. drig.
K. N. D. A., No. 36 Kettleman North, Kings Co.	36-22-18	9,733	P.B. 9,240
Standard Oil Co., No. 23 Kettleman North, Fresno Co.	19-21-17	5,160	sd. sh. drig.
Standard Oil Co., No. 56 Kettleman North, Fresno Co.	19-21-17	....	rigging up
Standard Oil Co., No. 65 Kettleman North, Fresno Co.	19-21-17	5,984	sd. sh. drig.
Standard Oil Co., No. 72 Kettleman North, Fresno Co.	19-21-17	5,882	sd. sh. drig.
Standard Oil Co., No. 2 Kettleman Middle, Kings Co.	29-23-19	8,600	hd. sd. drig.
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	2,495	sd. sh. drig.
Union-Hancock, No. 1 Tulare Lake, Kings Co.	28-22-20	5,275	sd. sh. drig.
Pismo Pet. Corp., No. 1 Pismo, San Luis Obispo Co.	5-32-13	2,665	sd. sh. drig.
United Oil Co., No. 1 Cholame, San Luis Obispo Co.	2-32-21	380	sd. sh. drig.
Barnsdall Oil, No. 1 Carissa Plains, San Luis Obispo	24-28-17	2,272	sd. sh. drig.
Amerada Pet., No. 7 Tracy, San Joaquin Co.	15- 2- 5	6,160	P.B. 4,035
Standard Oil, No. 1 McDonald Island, San Joaquin	25- 2- 4	4,270	sd. sh. drig.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging back (or plugged) back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rmg., reaming.
Redrig., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdtr. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.S.C., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Northern Counties Pet., No. 1 Tehama, Tehama Co...	25-24- 3	7,050	cleaning out
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	7,997	sd. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3- 1	4,357	fish. D.P.
Amerada Pet., No. 1 Emigh, Solano Co.	26- 4- 2	....	rigging up

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Republic Pet. Co., No. 2 El Segundo, Los Angeles Co.	18- 3-14	7,477	cmtd. 7,350
Marvin, J. L., No. 1 El Segundo, Los Angeles Co.	7- 3-14	7,053	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co.	10- 3-14	3,841	rigging up
Shell Oil Co., No. 1 Moneta, Los Angeles Co.	33- 3-14	7,352	P.B. 4,309
Sioux Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	....	bldg. rig
White Five Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,885	P.B. 3,790
White Five Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	....	bldg. rig
Linderman, G. K., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,161	sd. sh. drlg.
Regent Oil Co., No. 1 Torrance, Los Angeles Co. ...	6- 4-14	....	bldg. rig
Sterling Oil Co., No. 1 Torrance, Los Angeles Co. ..	31- 3-14	3,877	100 b.d. cmpr.
Roach, W. C., No. 1 Torrance, Los Angeles Co.	31- 3-14	....	bldg. rig
Walken Oil Co., No. 1 Torrance, Los Angeles Co. ..	5- 4-14	1,392	sd. sh. drlg.
Dumas-Lewis Oil, No. 2 Torrance, Los Angeles Co.	6- 4-14	....	bldg. rig
R. & N. Oil Co., No. 1 Torrance, Los Angeles Co. ..	18- 4-14	3,396	cleaning out
Langstaff Pet. Corp., No. 1 Torrance, Los Angeles Co.	31- 3-14	....	bldg. rig
Lawler Pet. Co., No. 1 Torrance, Los Angeles Co. ..	31- 3-14	....	bldg. rig
McVan Oil Co., No. 1 Torrance, Los Angeles Co. ..	31- 3-14	....	rigging up
Redondo Oil Corp., No. 1 Torrance, Los Angeles Co. .	31- 3-14	....	rigging up
Tu-Jax Oil Co., No. 1 Torrance, Los Angeles Co. ..	32- 3-14	1,171	sd. sh. drlg.
Rennek O. & G., No. 1 Torrance, Los Angeles Co.	5- 4-14	3,448	O.S. drlg.
Rennek O. & G., No. 2 Torrance, Los Angeles Co.	5- 4-14	....	bldg. rig
C. C. M. Oil Co., No. 23 Torrance, Los Angeles Co.	8- 4-14	4,840	sd. sh. drlg.
West American Oil, No. 1 Dominguez, Los Angeles	3- 4-13	8,098	sd. sh. drlg.
Union Oil, No. 8 Dominguez Carson, Los Angeles Co.	33- 3-13	5,292	sd. sh. drlg.
Shell Oil Co., No. 1 Long Beach, Los Angeles Co. ..	13- 4-13	6,398	gr. sh. drlg.
Barnsdall Oil Co., No. 15 Rosecrans, Los Angeles Co.	18- 3-13	4,955	P.B. 4,401
Mars Oil Co., No. 1 Athens, Los Angeles Co.	7- 3-13	4,850	test. W.S.O.
Associated Oil, No. 18 Seal Beach, Los Angeles Co.	11- 5-12	4,097	sd. sh. drlg.
Standard Oil Co., No. 27 Seal Beach, Los Angeles Co.	3- 5-12	5,031	sd. sh. drlg.
Engler & Long, No. 1 Artesia, Los Angeles Co.	25- 3-12	5,888	P.B. 5,100
Standard Oil Co., No. 17 Inglewood Deep, Los Angeles	8- 2-14	3,340	flow. 520 b.d.
Ohio Oil Co., No. 18 Del Rey, Los Angeles Co.	22- 2-15	6,380	swbng.
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	7,260	sd. sh. drlg.
Royalty Service Corp., No. 6 Del Rey, Los Angeles	22- 2-15	6,350	cmtd. 6,270
Union Oil Co., No. 21 Del Rey, Los Angeles Co.	27- 2-15	5,975	sd. sh. drlg.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co. ..	1- 3-16	1,998	hd. sd. drlg.
Yant Pet. Corp., No. 2 Newhall, Los Angeles Co. ..	36- 4-16	....	rigged up
Eyer Pet. Co., No. 1 Compton, Los Angeles Co.	20- 4-13	3,794	rig to pump
Sovereign Oil Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,663	P.B. 3,535
Cedri Oil Co., No. 1 Wilmington, Los Angeles Co. ..	29- 4-13	3,390	sd. sh. drlg.
General Pet. Corp., No. 1 Wilmington, Los Angeles	4- 5-13	....	drive piles
Standard Oil Co., No. 79 Montebello, Los Angeles Co.	2- 2-12	6,130	sd. sh. drlg.
Standard Oil Co., No. 81 Montebello, Los Angeles Co.	2- 2-12	3,750	hd. sd. drlg.
Standard Oil Co., No. 82 Montebello, Los Angeles Co.	2- 2-12	7,298	hd. sd. drlg.
Standard Oil Co., No. 83 Montebello, Los Angeles Co.	2- 2-12	3,993	P.B. 3,244
Standard Oil Co., No. 84 Montebello, Los Angeles Co.	2- 2-12	2,985	pump. 100 b.d.
Womac, Inc., No. 3 Montebello, Los Angeles Co. ..	4- 2-11	3,164	P.B. 2,960
Woodward, J. A., No. 1 Montebello, Los Angeles Co.	4- 2-11	3,521	sd. sh. drlg.
Texas Co., No. 13 Montebello, Los Angeles Co.	5- 2-11	7,312	P.B. 6,914
Universal Consd., No. 6 Montebello, Los Angeles Co.	5- 2-11	4,572	sd. sh. drlg.
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	6,353	cmtd. 5,720
Richfield Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	4,193	sd. sh. drlg.
Richfield Oil Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	3,180	sd. sh. drlg.
North American, No. 2 Montebello, Los Angeles Co.	5- 2-11	4,881	hd. sd. drlg.
St. Helens Pet. Co., No. 7 Montebello, Los Angeles Co.	5- 2-11	1,531	hd. sh. drlg.
Oil & Gas Associates, No. 1 Pico, Los Angeles Co. ..	9- 2-11	4,281	repair mach.
McVicar & Rood, No. 1 San Jose Hills, Los Angeles	6- 2- 9	....	bldg. rig
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5- 5	2,266	hd. sd. drlg.
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	1,820	sd. sh. drlg.
Terry, George, No. 1 Westminister, Orange Co.	17- 5-11	....	material
Hillman & Long, No. 1 Westminister, Orange Co. ..	14- 5-11	6,965	sd. sh. drlg.
West American Oil Co., No. 1 East Coyote, Orange	24- 3-10	....	material
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3- 9	2,470	sd. sh. drlg.
Union Oil Co., No. 31 Chapman Richfield, Orange Co.	30- 3- 9	....	bldg. rig
Union Oil Co., No. 32 Chapman Richfield, Orange Co.	30- 3- 9	....	bldg. rig
Continental Oil Co., No. 1 Yorba, Orange Co.	21- 3- 9	4,796	P.B. 2,492

KANSAS

(Week Ending April 25. Descriptions are East unless marked otherwise)

Barton County

Arch E. Merriam No. 1 Soeken, SW SW SE sec. 27-17-11w. Drlg. 2,820 ft.

Buchanan & Alexander No. 1 Langfeld NE NE SW sec. 14-20-11w. Drlg. 3,200 ft.

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w. Drlg. 16 ft.

Davison et al No. 1 Birzer, SW SE SW sec. 22-17-12w. Drlg. 985 ft.

George W. Hinkle No. 1 Smith, SW NW NW sec. 1-17-11w. T.D. 3,471 ft.; D.&A.

Morgan & Flynn et al No. 1 Zimmer, SE SE SW sec. 20-19-14w. Drlg. 3,428 ft.

Murphy & Morgan No. 1 Robinson, NE NE SW sec. 21-16-14w. U.R. 3,175 ft.

G. E. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. M.L.M.

Ray Ramsey et al No. 1 Hunt, NW cor. sec. 10-18-11w. Siliceous 3,382 ft.; T.D. 3,404 ft.; est. 25 bbls. oil per day.

Schermerhorn Oil Co. No. 1 Hunter, NE cor. sec. 29-18-15w. Set 10-in. csg. 2,-344 ft.

Simpson & Noble and Atlantic Oil Producing Co. No. 1 Hiss, C NW NE sec. 31-20-13w. K.C. 3,205 ft.; cd. to 3,385 ft.; with 3 ft. of saturation; R.U.S.T.

Terry & Feaster No. 1 Feist, NE NE SE sec. 29-18-11w. Siliceous lime 3,430-32½ ft.; T.D.; potential; pumped 346 bbls. oil in 18½ hrs.

Wakefield & Johnson No. 1 Bumm, SW SW NE sec. 22-19-12w. Drlg. 70 ft.

Butler County

Sanford et al No. 1 Weaver Est., SE SE NE sec. 11-28-5. Spudded.

Ellis et al No. 1-A Pettit, SE SE NW sec. 21-28-6. Spudded.

Cowley County

Baden Prod. Co. No. 1 Sparks, SE SW NW sec. 35-33-4. R.U.

Craft et al No. 1 Whitson, NE NE NE sec. 20-33-4. Drlg. 50 ft.

DeGenther Oil Co. No. 1 Holt, NW NW SE sec. 15-30-5. R.U.

Mead Bros. et al No. 1 Orr, SE SE SW sec. 23-31-4. Miss. L. 2,988 ft.; T.D. 3,-044 ft.; D.&A.

D. D. Mickleson et al No. 1 Wallace, SW SE SE sec. 10-33-4. Spudded.

A. D. Morton et al No. 1 Roger, SE SE NE sec. 1-31-4. Spudded and S.D.

Penwest Oil Co. No. 1 Clover, NE SE SE sec. 8-31-7. 19,000,000 ft. gas 1,430-60 ft.; Siliceous 3,177 ft.; T.D. 3,182 ft.; showing water; P.B. 1,490 ft.

Roth & Faurot No. 1 Guthrie, NW cor. Lot 14, sec. 30-33-8. Drlg. 3,135 ft.

Trees Oil Co. No. 1 Simpson, C NE NW sec. 3-30-4. Rig.

Wakefield et al No. 1 Daniels, SE SW SE sec. 3-30-3. Spudded.

Edwards County

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec 14-26-18w. Spudded.

Ellis County

Empire O. & R. Co. No. 1 Herl, SE cor. sec. 22-15-19w. Rig.

Bridgeport Machine Co. et al No. 1 Madden Est., NE NW NW sec. 26-15-18w. Set 12-in. csg. 858 ft.

Brunson & Ewers-Simpson No. 1 Gross, NE NE SW sec. 29-14-17w. Anhydrite 1,110 ft.; drlg. 1,870 ft.

Harris & Haun et al No. 1 Schmeidler, SE SE SW sec. 3-13-17w. Drlg. 510 ft.

Jones Bros. & Carpenter et al No. 1 Solomon, SE SE SW sec. 28-11-19w. Anhydrite 1,408 ft.; drlg. 1,635 ft.

Lario Oil & Gas et al No. 1 Walter, SE NE SW sec. 2-12-18w. Anhydrite 1,314 ft.; drlg. 2,508 ft.

Muth et al No. 1 Penney, SW SW SE sec. 29-14-18w. M.L.M.

Tom Palmer No. 1 Schoenthaler, NE NE NW sec. 31-12-19w. R.U.R.

Parrish & Denman No. 1 Walter, SE SW SE sec. 14-13-17w. Bldg. rig.

Rose Spring Drlg. Co. et al No. 1 Union Pacific, NE cor. sec. 9-13-20w. Loc.

Twin Drlg. Co. No. 1 Copeland, NE NE SW sec. 26-14-19w. Rig.

Twin Drlg. Co. No. 1 Reidel, SW SW NE sec. 27-13-16w. Oswald 3,213 ft.; S.O. 3,240 ft.; S.D. 3,355 ft.

Wolf Creek Oil Co. et al No. 1 Polifka, SW SW NE sec 24-13-18w. Loc.

Yarnell & Carlson No. 1 Phillip, NW NW SE sec. 2-14-15w. Drlg. 725 ft.

Ellsworth County

Empire O. & R. Co. et al No. 1 Kroesch, NW NW SE sec. 33-17-9w. S.D. 2,900 ft.

Skiles et al No. 1 Kafka, NE NE SW sec. 15-17-8w. K.C. L. 2,835 ft.; drlg. 3,205 ft.

Finney County

Helmerich & Payne No. 1 Jones, C SE sec. 34-26-34w. Rig.

Lone Star State Drlg. Co. No. 1 Hamlin, SW SW NE sec. 31-24-34w. Set 12-in. csg. 570 ft.

Graham County

Vickers Pet. Co. & Phillips Pet. Co. No. 1 Hutton, NE NE SE sec. 29-8-22w. T.D. 1,750 ft.; U.R.

Greenwood County

Hale & Reese No. 1 Needles, NE SE NW sec. 12-25-10. S.D. 285 ft.

Ward McGinnis No. 1 Dater, NW NW SW sec. 11-24-8. Spudded.

Ward McGinnis No. 1 Lampe, NW NE SW sec. 26-24-8. Rig.

Harper County

Marathon Oil Co. No. 1 Zellers, C SW NW sec. 17-35-6w. Wilcox sand 5,320 ft.; S.O. and gas, salty taste; T.D. 5,410 ft.; fsg.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. U.R. 2,857 ft.

Western Kansas O. & R. Co. No. 1 Warkentin, C SW SW sec. 1-23-2w. Chat, 2,970 ft.; T.D. 3,001 ft.; pot. 569 bbls.; comp.

Haskell County

Helmerich & Payne et al No. 1 Larson, C SE sec. 28-28-32w. Rig.

Kuhn Brothers et al No. 1 Nilson, SW SW SE sec. 21-28-32w. R.U.R.

Kingman County

D. R. Lauck et al No. 1 Prather, C SE sec. 18-27-8w. Cellar.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 33-27-8w. O.W.D.D.; drlg. 4,583 ft.

McPherson County

Empire Oil & Ref. Co. No. 1 Cunningham, SE cor. sec. 26-18-1w. Set 12-in. csg. 1,365 ft.

Ness County

Continental Oil Co. No. 1 Thompson, C E½ E½ SW sec. 13-18-26w. Drlg. 2,675 ft.

Reno County

Cheney et al No. 1 Moore, NE cor. sec. 14-26-8w. Drlg. 1,465 ft.

Dickey Oil Co. No. 1-A Shepherd, NE NE NW sec. 22-26-9w. Chat 3,870 ft.; wtr., 4,161 ft.; S.D.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. Drlg. 2,815 ft.

Helmerich & Payne et al No. 1 Schwaiger, SW SE NE sec. 27-26-5w. Drlg. 3,795 ft.

McPherson Drlg. Co. et al No. 1 Miller, SE SE NE sec. 23-24-5w. Chat 3,365-73 ft.; Viola 3,779 ft.: Wilcox 3,818 ft.; H. F.W. 3,835-41 ft.

Rice County

Beardmore et al No. 1 Fuller, SW SW SE sec. 23-18-7w. Spudded.

Day No. 1 Mason, NW NE NE Sec. 28-21-7w. Chat 3,388-3,400 ft.; flowed 91 bbls. in 50 minutes; shut in 2 hrs., flowed 3 bbls. oil in 10 min.; C.O.

Dickey Oil Co. and Continental Oil Co. No. 1 Newkirk, NE NE SW sec. 11-18-7w. Drlg. 1,990 ft.

Duwe & Schneider No. 1 Wright, NE cor. sec. 36-21-7w. U.R. 2,895 ft.

Glimac Oil Co. No. 1 Sargent, SE cor. sec. 31-18-6w. Drlg. 675 ft.

Grattan et al No. 1 Williams, SW SW NW sec. 17-18-7w. K.C. L. 2,818 ft.; cg. 3,-202 ft.: H.F.W. 3,207-12 ft.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Permian Oil Co. No. 1 Monroe, C NE NE sec. 9-20-7w. Set 10-in. csg. 2,114 ft.; S.D. 2,605 ft.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7w. Rig.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Bldg. rig.

Simpson & Noble et al No. 1 Pulliam, C S½ N½ NE sec. 35-19-8w. Drlg. 200 ft.

Simpson & Noble and Stanolind O. & G. Co. No. 1 Bowman, SW SW NW sec. 22-19-10w. Loc.

Skiles et al No. 1 Stout, SE cor. sec. 6-21-9w. Bldg. rig.

W. E. Witt No. 1 Hill, SE SE NW sec. 3-20-9w. Drlg. 2,855 ft.

Rooks County

Hartman & Blair et al No. 1 Hall, NW cor. sec. 25-10-17w. Rig.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. S.D. 780 ft.

Murfin et al No. 1 Wasthusin, NE NE SE sec. 19-9-16w. U.R. 2,288 ft.

Skaer Oil Corp. et al No. 1 Dryden, NE cor. sec. 28-10-17w. Drlg. 555 ft.

Rush County

Boyle & Grossman No. 1 Wilson, NE cor. sec. 33-17-19w. Drlg. 585 ft.

Ira Keith et al No. 1 Dartmouth Savings Bank, SW SW NE sec. 8-17-18w. Oswald 3,335 ft.; R.U.S.T. 3,346 ft.

National Refining Co. No. 1 Werth, NW NE NE sec. 7-16-18w. Anahydrite 1,-195 ft.; U.R. 2,560 ft.

Pryor & Lockhart et al No. 1 Stegman, SW NW NE sec. 11-16-17w. R.U.

Rose Spring Drlg. Co. et al No. 1 Jacobs, SW SE NW sec. 8-16-17w. Set 7-in. csg. 3,310 ft.; T.D. 3,341 ft.

Russell County

R. G. Berry et al No. 1 Cook, NE NE SE sec. 19-11-13w. C.O. 2,610 ft.

Bridgeport Machine Co. et al No. 1 Wyckoff, SE NW NE sec. 27-11-13w. Oswald 2,955 ft.; fsg. 3,460 ft.

Central Pet. Co. No. 1 Furthmeyer, NE cor. sec. 28-14-15w. Anhydrite 838 ft.; fsg. 2,280 ft.

Darby Petroleum Corp. and Continental Oil Co. No. 1 Letsch, SE NE NW sec. 34-14-13w. S.D. 2,002 ft.

Eisenhour & Shaffer No. 1 Humes, SW SW SW sec. 6-14-12w. U.R. 2,560 ft.

Hartman & Blair No. 1 Johnston, NW cor. sec. 11-13-14w. Bldg. rig.

Hartman & Blair No. 1 McAllister, SW SW SE sec. 24-13-15w. R.U.

Sam Murphy et al's No. 1 Enschutz & Schaffer, SW cor. sec. 10-16-13w. Siliceous 3,311 ft.; T.D. 3,327 ft.; pot. 515 bbls.; comp.

Stearns & Streeter et al No. 1 John Hancock Ins. Co., SE SW SW sec. 31-12-14w. Drlg. 1,763 ft.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w.
Tarkio lime 3,515 ft.; T.D. 3,550 ft.; swbd. 5 bbls. oil per hr., and showing of wtr.; acidised with 1,000 gals.; made potential of 243 bbls. of oil.

P. G. Reynolds No. 1 Fredrickson, SE SW SE sec. 6-13-12w. S.D. 2,630 ft.

Wakefield et al No. 1 Krug, NE NW SW sec. 7-15-14w. R.U.

Sedgwick County

Dickey Oil Co. No. 1 Ayers, SW SW NW sec. 12-27-2. Drlg. 2,195 ft.

Stafford County

Lario O. & G. Co. et al No. 1 Andrews, C NW NE sec. 1-21-13w. T.D. 3,536 ft.; D.&A.

Stanolind O. & G. Co. and Atlantic Oil Prod. Co. No. 1 Shotton, SW cor. sec. 27-22-13w. Anhydrite 735 ft.; drlg. 2,-900 ft.

Sumner County

Craft & Wilson No. 1 Nevitt, NE NW NE sec. 36-32-2e. Stalmaker 2,223-43 ft.; set 8-in. csg.

Helmerich & Payne et al No. 1 Elwell, NW NW NE sec. 18-34-1. Chat 3,867 ft.; fsg. 3,967 ft.

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. Set 8-in. csg. 1,-950 ft.

Pryor & Lockhart et al No. 1 Knowles, SW cor. sec. 30-30-1. Drlg. 900 ft.

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. Rig.

Wilcox O. & G. Co. et al No. 1 Hess, SE SE NW sec. 13-34-2w. Drlg. 2,520 ft.

D. J. Wilson et al's No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW sec. 16-35-1w. Drlg. 4,000 ft.

Trego County

Central Commercial's No. 1 Wagg, NW NW SE sec. 17-13-21w. K.C. lime 3,548 ft.; bailed 30 bbls. oil per day; acidised; bailed 13 bbls. oil per day; T.D. 3,908 ft.; 100 ft. O.I.H. in 6 hrs.; C.O.

Continental Oil Co. No. 1 Holcomb, E½ E½ NW sec. 26-11-23w. Oswald lime, 3,602 ft.; cor.; T.D. 3,654 ft.: acidised; pmpd. 439 bbls. in 22 hrs.

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-12-24w. M.L.M.

R. B. McNeely et al No. 1 Lemke, NW NW SW sec. 7-11-22w. Rotary rig.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.

Foster et al No. 1 Timm, SE NW NE sec. 26-25-13. Spudded.

Roy Johnson No. 1 Hare, C N½ NW NE sec. 32-25-14. R.U.

Mendenhall et al No. 1 Hunter, NE cor. sec. 36-25-14. Drlg. 2,275 ft.

C. L. Sheedy No. 1 Baker, SE SE NW sec. 2-26-14. T.D. 1,530 ft.; P.B. 1,525 ft.

Max Reynolds No. 1 Guy, NE NE SE sec. 29-25-14. T.D. 1,478 ft.; D.&A.

OKLAHOMA

Week Ending April 25

NORTHERN OKLAHOMA

Beckham County

Wood Pet. & Royalty Corp. No. 1 Blair, C NW SE sec. 33-9-26w. Granite wash 2,-942-71 ft.; granite 2,984 ft.; T.D. 2,989 ft.; S.D.

Caddo County

Denver Prod. & Ref. Co. No. 1 Sah-Can, C SE SE sec. 33-10-10w. Drlg. in new hole below 3,000 ft.

Cleveland County

Hall-Briscoe, Inc. No. 1 Fant, S½ SW

NE sec. 27-19-3w. S.D. at 7,511 ft.

Asa Lee Mayes, Inc., No. 1 Parsons, SW SW SE sec. 30-9-1. T.D. 3,510 ft.; moving rig out.

Cool County

Shell Pet. Corp. No. 3 Hill, SE SE NW sec. 30-3-10. Hunton 5,280 ft.; Sylvan 5,355 ft.; Viola 5,448 ft.; S.O. 5,640-57 ft.; Bromide 5,560 ft.; McLish 5,720 ft.; drlg. 5,918 ft.

Comanche County

N. E. Milling No. 1 Miller, NE NE SW sec. 23-4-12w. T.D. 995 ft.; machine moved out.

Garfield County

Herndon Drlg. Co. et al No. 1 Branson, SW SW SE sec. 23-24-3w. Drlg. 4,780 ft.

W. J. Sherry et al No. 1 Haken, NW NW SW sec. 32-20-10w. Miss. lime 5,960 ft.; whipstock 5,839 ft.; drlg. by, 5,844 ft.

Stanolind O. & G. Co. et al No. 1 Brunken, SW SW NE sec. 32-22-4w. Top Dense 5,915 ft.; Dolomite 5,935 ft.; T.D. 5,962 ft.; R.U.S.T.

Garvin County

Charles E. Carter et al No. 1 Wood, NW SW SE sec. 5-4-3. O.W.D.D.; drlg. 1,790 ft.

Hughes County

M. H. Halsey No. 1-A Eustep, NW NW SW sec. 11-8-9.
Wapanucka 3,428 ft.; Cromwell 3,452 ft.; T.D. 3,454 ft.; 2 bailers wtr. an hr.; P.B. and shot, 3,030-45 ft.; est. 10,000,000 ft. of gas; P.B. to 3,412 ft.; re-shot.

George Orr et al No. 1 Morgan, NE SE SW sec. 6-7-9. Cellar and pits.

Phillips Pet. Co. No. 1 Eberle, NE NE SW sec. 12-5-9. Wapanucka 3,887 ft.; Cromwell 4,368 ft.; T.D. 4,495 ft.; rng. Halliburton tester.

Sinclair Prairie Oil Co. et al No. 1 Wilkiy, SW cor. sec. 23-9-8. R.U.R.

Sivalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. Booch 2,950 ft.; Gilcrease 3,100 ft.; U.R.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 13-27-4. R.U.S.T.

Kiowa County

W. C. Adams et al No. 2-A Stone, C SE SE NE sec. 24-7-17w.
T.D. 1,193 ft.; machine moved out.

McClain County

Arab Pet. Corp. No. 1 Autry, NW cor. sec. 16-7-3w. T.D. 8,264 ft.; cmtd. to 8,000 ft.; P.B.

McCurtain County

Louis Sikes No. 1 Mitchell, C NW SW sec. 12-9s-26. Spudded and S.D. for 30 days.

McIntosh County

Indian Ty. Oil Co.'s No. 1 Tancred. 1,050 ft. S and 990 ft. E of C. Sec. 9-9-14 Wilcox 4,525 ft.; T.D. 4,536 ft.; 300 ft. wtr. in hole.

Oklahoma Oil Corp. No. 1-A Wolf, SE SW SE sec. 35-12-17. Gas sand 800 ft.; dry sands 1,200 ft. and 1,400 ft.; set 6-in. csg. at 2,567 ft.; H.F.W. 3,555-70 ft.

Noble County

Continental Oil Co. No. 1 Pruitt, NW SE SW sec. 19-29-1w Oswego 4,288 ft.; Viola 4,972 ft.; T.D. 4,992 ft.; bailing.

Okfuskee County

Amerada Pet. Corp. and Stanolind O. & G. Co. No. 1 Wells, SW SW NW sec. 7-11-7. T.D. 90 ft.; setting sur. pipe.

Champlin Ref. Co. No. 1 Thompson, SW SW NW sec. 7-13-8. Drlg. 570 ft.

Manahan & Grisso No. 1 Dalton, SE SE SE sec. 26-16-8.
Senora sand 1,723 ft.; T.D. 1,763 ft.; flowed 75 bbls. oil first hour after shot; flowed 225 bbls. in 7 hrs., and 293 bbls. in 9 hrs.; lost 4 hrs. while cleaning out.

Oklahoma County

H. R. Hollenback et al No. 1 Cooper, NW NW NE sec. 15-11-1. Drlg. 5,514 ft.

Sinclair Prairie O. & G. Co. No. 1 Corbett, NE NW NE sec. 17-13-3w.
Washed clean and acidized; flowed 17⅛ bbls. "gasoline" and 2,000,000 ft. of gas in 24 hrs.; first Wilcox 6,565 ft.; second Wilcox 6,655 ft.; flowed 240 bbls. in 24 hrs.; comp.

Osage County

Champlin Ref. Co. No. 1 Osage, SW SW NE sec. 35-25-6. T.D. 772 ft.; set 12-in. csg.

Elfred Beck No. 1 Osage, SE SE NE sec. 16-23-7. Drlg. 1,520 ft.

Gray & Folson No. 1 Osage, SW SW NE sec. 33-25-7. Rig.

Midco Oil Corp. et al No. 1 Osage, NW NW SE sec. 11-23-6. T.D. 599 ft.; set 12-in. csg.

Stoner Bros. No. 1 Osage, NW NE SW sec. 18-23-8. Loc.

Payne County

Denver Producing & Ref. Co. et al No. 1 Pratt, NW cor. sec. 26-18-3. Rig.

Pontotoc County

Sandback et al No. 1 Sands, NE NE NE sec. 29-2-5. T.D. 475 ft.; S.D. for new machine.

J. L. Shaw No. 1 Illinois Bankers Life Ins. Co., NW SW NE sec. 1-4-5. Viola 2,599 ft.; T.D. 2,854 ft.; D.&A.

Pottawatomie County

Gulf Oil Corp. No. 1 Bois-Clark, SW SE SE sec. 21-6-4. Dolomite 3,760 ft.; T.D. 3,835 ft.; D.&A.

Ross Oil Co. et al No. 1 Sparkman, SE NE sec. 33-8n-4e.
C.O. 3,915 ft.; shot at 3,871-90 ft.; swbd. 350 bbls. in 24 hrs.; acidized.

J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,590 ft.

Seminole County

Amerada Pet. Corp. et al No. 1 Community, NE NE SW sec. 3-10-5. Hunton, 4,421 ft.; T.D. 4,438 ft.; flowed 768 bbls. in 18 hrs.

Ark Royalty Co. No. 1 Kiker, SE SE NE sec. 9-10-7. Spudded and S.D.

Imperial Drlg. Co. No. 1 Aldridge, SW NE NW sec. 32-9-8. Calvin, 1,869 ft.; T.D. 1,907 ft.; gas 4,800,000; showing wtr.; P.B. 1,900 ft.; setting 5-in. csg.

Sinclair Prairie Oil Co. et al No. 1 Harrison, NE NE NW sec. 17-8-8. Cromwell 3,232-3,360 ft.; drlg. 3,840 ft.

Felmlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

Washita County

L. P. McWhirter's No. 1 fee, NW cor. Sec. 34-8n-19w. T.D. 1,465 ft.; fsg.

SOUTHERN OKLAHOMA

Atoka County

Riverland Oil Co. No. 1 Jones, SW SW NE sec. 4-3s-9e. R.U.

Bryan County

Trio Oil Co. No. 3 Gilbert, C SW sec. 25-8s-7e. Drlg. 815 ft.

Carter County

Carter Oil Co. No. 1 Carter-Williams, SW NE SW sec. 27-2s-3w. T.D. 8,105 ft.; flowed 3,309 bbls. first 24 hrs.; shut in.

Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. Drlg. 3,975 ft.

Texas Co. No. 1 Cathey, SE NE NE sec. 6-5s-1w. T.D. 4,191 ft.; pmpd. 22 bbls. in 24 hrs.; S.D.O.

Cotton County

English Drlg. Co. No. 1 Wilson, NW NW SE sec. 7-4s-11w. Loc.

Harmon County

Lloalko Trust, Ltd. No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. Drlg. 2,145 ft. in broken L.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. Granite Wash 1,350 ft.; gas 500,000 ft.; set 8⅝-in. csg. 1,370 ft.; drlg. 1,457 ft.

John Dickson et al No. 1 W. B. Wright, NE NW SE sec. 19-1-19w. Loc.

A. H. Jackman No. 1 fee, SW SW SW sec. 27-1s-24w. T.D. 2,528 ft.; fsg.

Universal Oil Co. No. 1 R. W. Briscoe, NW SW NE sec. 36-1s-20w. Drlg. 2,260 ft.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w. Sd. 1,525-57 ft.; T.D. 1,980 ft.; fsg.

Geo. Pace No. 1 Gardner, SW cor. Sec. 23-5s-5w. T.D. 2,532 ft.; S.D.O.

Reno Oil Co. No. 1 Gann, SE SW NE sec. 35-4s-4w. Drlg. 2,915 ft.

Johnston County

Equitable O. & G. Co. No. 1 Bellsey, NE SW sec. 12-2s-4e.
Arbuckle lime 1,552 ft.; drlg. 1,938 ft. in lime.

Magnolia Pet. Co. No. 1 Green, NE cor. sec. 12-2s-7. Hunton 1,138 ft.; fsg. 1,340 ft.

Moore & Wirick No. 1 Westheimer & Daube, SE NW NE sec. 19-3s-4e. T.D. 3,486 ft.; fsg.

Love County

Amerada Pet. Corp.'s No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft. in L.; making Eastman sur.

J. B. Russell et al No. 1 Scott, SW SE SW sec. 29-5s-2e. T.D. 4,963 ft.; S.D. for orders.

Sinclair Prairie Oil Co.'s No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 6,914 ft.; sd. 6,830-6,909 ft.; flowed and swbd. 534 bbls. oil in 5 days; drlg. 7,622 ft. in sh.

Marshall County

Heimerich & Payne No. 1 Taliaferro, NW SE SW sec. 26-5s-5e. Loc.

Norman Smith No. 1 Chestnut, NE cor. sec. 23-5s-5e. T.D. 553 ft.; D.&A.

Pushmataha County

C. W. Whitehead et al No. 1 Misser, SE SW SW sec. 35-3s-18e. T.A.; T.D. 1,560 ft.

Stephens County

W. G. Endicott et al No. 1 McFatridge, NW NW SW sec. 11-3s-9w. Drlg. 1,200 ft.

T. H. McCasland No. 1 J. C. Parker, NE NE SW sec. 2-1n-6w. M.L.M.

Tillman County

Gulf Oil Corp. No. 1 Wearmouth, SE NW SE sec. 31-1s-15w. T.D. 4,526 ft.; lost circulation; S.O.&G.

D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-19w. S.D. 495 ft.

ARKANSAS

Arkansas County

Ark. O. & G. Co. No. 3 Fischer, 250 ft. S, 200 ft. E, NW cor. NE NW sec. 6-4w. R.U.; W.O.

Calhoun County

Ben G. Barnett No. 1 Freeman Smith, SE cor. sec. 36-15-14. Set 10-in. 634 ft.

Clark County

Soris Tripanoff, tr., No. 1 W. Gibbons, sec. 27-8-18. Arranging to test 557 ft.

Dallas County

Kel-Mac Lease & Royalty Co. No. 2 R. Owens, NW cor. NW SW sec. 26-10-16. S.D. 1,530 ft.

Hempstead County

Dixie Drlg. Co. No. 1 Wheatley, 330 ft. S. 30 ft. E, NW cor. SW NE sec. 14-11-26. R.U. and S.D.

Fitzwater et al No. 2 Lafferty, C NW sec. 17-14-24. Tested S.W. and W.O. 2,047 ft.

Murdock-May & Easton No. 1 Conway est., 330 ft. N and E, SW cor. NW SW sec. 17-14-24. Set 12½-in. 30 ft.; S.D. 120 ft.

LaFayette County

Earl F. Fox No. 2 Coleman Bros., NE NE sec. 30-16-24. S.D. 3,760 ft.

Erwin & Leach No. 3 Bodcaw Lbr. Co., 330 ft. S and E, NW cor. sec. 20-16-13. Drlg. 6,100 ft.

Joe Modisett No. 1 Red River Lbr. Co., C SW SW sec. 21-19-14. Drlg. plug. 5,-310 ft.

Transportation Pet. Co. No. 1 Cockran, 330 ft. S and W, NE cor. SE sec. 36-19-25. Tested S.W.; T.A. 3,675 ft.

Miller County

Odell Hinson No. 1 Montana Realty Co., NE cor. NW NW sec. 3-17-28. Set 13⅜-in. csg. 238 ft.

King Oil Corp. No. 1 G. W. Crank, SW NE sec. 19-16-25. S.D.; W.O. 3,906 ft.; (corrected).

C. V. Lenz No. 3 Dale, sec. 24-15-26. Cg. 5,826 ft.

M. L. Luckett No. 1 Beck, sec. 34-15-31. Drlg. 850 ft.

L. H. Mahon et al No. 1 Miller Land & Timber Co., SW cor. SE sec. 29-18-27. S.D. 1,812 ft.

Ouachita County

L. L. McDonald No. 1 Langley, 330 ft. N and E, SW cor. NE SW sec. 19-15-15. Cg. 2,040 ft.

Phillips Pet. Co. No. 1 J. D. Reynolds, 330 ft. N and W, SE cor. SE NW sec. 27-15-15. Arranging deepen 4,906 ft.

J. D. Reynolds No. 1 McKenzie, 204 ft. S, 300 ft. W, NE cor. SE SW sec. 31-15-16. Fsg. for cable tools 1,970 ft.

Union County

Arkansas Southern Oil Co. No. 1 F. R. Laney, sec. 30-19-16.
Installing larger rig. 175 ft.

Beuharal Oil Corp. No. 1 R. Pumphrey, SE cor. NE sec. 11-17-14. Drlg. 500 ft.

J. C. Bucbee No. 1 Ezzell, SW cor. NE NW sec. 13-17-15. Junked and abd. 1,572 ft.; skidding over.

McCressien Oil Co. No. 2 D. Norman, NE cor. NE SE sec. 3-18-13. W.O. jack to pump, 3,556 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

Ark.-La. Gas Co. No. 12 Rodessa Oil & Land Co., NW SE sec. 22-23-16. Drlg. 5,227 ft.

Ark.-La. Gas Co. No. 14 Rodessa O. & Land Co., SW cor. NW sec. 23-23-16. Drlg. 5,126 ft.

Ark.-La. Gas Co. No. 15 Rodessa Oil & Land Co., NE cor. SW NW sec. 23-23-16. Drlg. 2,451 ft.

Ark.-La. Gas Co. No. 16 Rodessa Oil & Land Co., SE cor. NE sec. 22-23-16. Set 10-in. 2,055 ft.

Ark-La Gas Co. No. 9-A Rodessa Oil & Land Co., SE NE sec. 22-23-16. Drlg. 5,831 ft.

Bartex P. L. Co. No. 1 Adams, NW cor. sec. 17-23-15. Set 16-in. 252 ft.; drlg. 3,656 ft.

Bartex Pipe Line Co. No. 3 Norton Est., SE NE sec. 18-23-15. Arranging set 7-in. 6,018 ft.; T.D. 6,038 ft.

Bartex Pipe Line Co. No. 4 Norton Est., SW cor. SW NW sec. 17-23-15. Drlg. 5,569 ft.

Bartex Pipe Line Co. No. 1 Robinson, C E½ NE SE sec. 18-23-15. S.D. 6,028 ft.

Bartex Pipe Line Co. No. 2 Robinson, center W½ NW SW sec. 17-23-15. Comp.; 11 B.P.H., 6,057 ft.

Bartex Pipe Line Co. No. 2 Rodessa Oil & Land Co., NE SE sec. 13-23-15. Testing 5,966 ft.

Blackwell O. & G. Co. No. 1 Nugent, SW cor. NE SE sec. 8-23-15. Drlg. 4,185 ft.

S. P. Borden No. 1 K.C.S., NW cor. SW sec. 23-23-16. Drlg. 5,542 ft.

Danciger O. & R. Co. No. 1 Francis heirs, C Lot 2, Blk. 10, sec. 23-23-16. Drlg. 5,570 ft.

Danciger O. & R. Co. No. 1 J. F. Neugent, C Lot 3, Blk. 12, sec. 23-23-16. Drlg. 5,542 ft.

Duncan & Woods No. 1 Andrews, Lot 5, Blk. 21, sec. 23-23-16. Drlg. 4,939 ft.

Haynes Prod. Co. No. 11 Lawton, 330 ft. N, 490 ft. E, SW cor. sec. 14-23-16. Set 7-in. 5,995 ft.; comp. 147 B.P.H., 6,012 ft.

Haynes Prod. Co. No. 12 Lawton, NE cor. SW SW sec. 14-23-16. 7-in. csg. 5,997 ft.; T.D. 5,995 ft.

Haynes Prod. Co. No. 13 Lawton, NW cor. SE SW sec. 14-23-16. Drlg. 4,992 ft.

Haynes Prod. Co. No. 14 Lawton, SW cor. NW SW sec. 14-23-16. Set 12½-in. 262 ft.; drlg. 1,414 ft.

Haynes Prod. Co. No. 5 Otwell, NE cor. SE SE sec. 14-23-16. Set 7-in. 5,988 ft.

Haynes Prod. Co. No. 3-A Mattie Pitts, SE cor. SE SW sec. 11-23-16. Drlg. 6,510 ft.

Haynes Prod. Co. No. 2 Zylks, NE cor. SW sec. 10-23-16. Drlg. 5,062 ft.

J. Edward Jones No. 1 Ashley, Lot 6, Blk. 13, sec. 22-23-16. Drlg. 5,523 ft.

J. Edward Jones No. 1 Gibson, SW cor. SE SW sec. 22-23-16. Set 16-in. 250 ft.; drlg. 2,716 ft.

R. W. Norton No. 2 Atkins Unit, NE cor. sec. 18-23-15. Set 13⅜-in. 200 ft.; drlg. 5,089 ft.

R. W. Norton No. 1 J. Elder Unit, NE cor. sec. 23-23-16. Comp.; 16 B.P.H., 6,045 ft.

R. W. Norton No. 2 Fosque Unit, SW cor. sec. 20-23-16. Drlg. 5,980 ft.

W. F. Lacey No. 1 Tyson, NE cor. SE NW sec. 24-23-16. Drlg. 5,540 ft.

Lyons & Neely No. 1 Blanton, C Lot 11 and 12, Blk. 22, sec. 22-23-16. Set 7-in. 6,008 ft.; comp. 3,000,000 ft. gas, 3 bbls. distillate per hr.

M. H. Marr No. 5 Hunter, NW cor. SW sec. 13-23-16. Drlg. 5,512 ft.

M. H. Marr No. 1 Peak, SW SE sec. 11-23-16. Comp. 45 B.P.H., 6,040 ft.

R. W. Norton No. 4-A Caddo Levee Board, NW NE sec. 21-23-16. Drlg. 5,172 ft.

R. W. Norton No. 1 Slattery, NW cor. sec. 28-23-16. Set 7-in. 5,991 ft.

O'Brien Bros. No. 3 Rodessa Oil & Land Co., SW cor. NW SW sec. 14-23-16. Set 16-in. 230 ft.; drlg. 3,305 ft.

Travis et al No. 1 Raney, 990 ft. W of C sec. 17-23-15. Testing 6,050 ft.

Tri-State O. & G. Co. No. 1 F. L. Westbrook, C Lot 6, Blk. 12, sec. 23-23-16. Drlg. 1,650 ft.

Tri-State-Williams & Peterbaugh No. 1 Ellis, Lot 2, Blk. 20, Townsite, sec. 23-23-16. Set 7-in. 5,955 ft.; T.D. 6,018 ft.

United Gas Pub. Ser. Co. No. 6 Ardis & Co., SE cor. sec. 14-23-16. Comp. 57 B.P.H., 6,037 ft.

United Gas Pub. Ser. Co. No. 7 Ardis & Co., SW cor. SE SW sec. 14-23-16. Drlg. 5,853 ft.

United Gas Pub. Ser. Co. No. 1 Maroun Unit, 330 ft. S and E, NW cor. sec. 24-23-16. Drlg. 5,438 ft.

United Gas Pub. Ser. Co. No. 1 McCoy, NE cor. sec. 16-23-16. R.U.

United Gas Pub. Ser. Co. No. 3 Miller, SW cor. NW NW sec. 14-23-16. Set 13⅜-in. 315 ft.; drlg. 3,406 ft.

United Gas Pub. Ser. Co. No. 2 M. L. Pitts Unit, NE SW sec. 13-23-16. Comp. 17 B.P.H., 6,068 ft.

United Gas Pub. Ser. Co. No. 3 M. L. Pitts Unit, NE SW sec. 13-23-16. Set 7-in. 6,035 ft.; comp. 5 B.P.H. 6,050 ft.

United Gas Pub. Ser. Co. No. 4 M. L. Pitts Unit, SW cor. sec. 13-23-16. Set 7-in. 6,011 ft.; T.D. 6,047 ft.

United Gas Pub. Ser. Co. No. 2 N. B. Spearman Unit, SW NW sec. 18-23-14. Drlg. 5,629 ft.

United Gas Pub. Ser. Co. No. 3 Thomas Unit, Lots 4 and 5, Blk. 5, Townsite, sec. 23-23-16. Set 13⅜-in. 314 ft.; drlg. 4,566 ft.

United Gas Pub. Ser. Co. No. 4 Thomas Unit, NW cor. NE NW sec. 23-23-16. Drlg. 4,575 ft.

United Gas Pub. Ser. Co. No. 5 Thomas Unit, NW cor. SE NW sec. 23-23-16. Drlg. 4,230 ft.

United Gas Pub. Ser. Co. No. 8 Tyson Unit, SW NW sec. 13-23-16. Comp. 13 B.P.H., 6,045 ft.

United Gas Pub. Ser. Co. No. 9 Tyson, NE cor. sec. 14-23-16. Comp. 35 B.P.H., 6,032 ft.

United Gas Pub. Ser. Co. No. 1 U. S. Govt., sec. 29-23-16. Set 13⅜-in. 350 ft.; drlg. 5,602 ft.

United Gas Pub. Ser. Co. No. 13 Rodessa Oil & Land Co., SW NE sec. 22-23-16. Cg. 5,965 ft.

United Gas Pub. Ser. Co. No. 14 Rodessa Oil & Land Co., NE cor. sec. 22-23-16. Cg. 5,799 ft.

United Gas Pub. Ser. Co. No. 15 Rodessa Oil & Land Co., NE cor. sec. 22-23-16. Comp. 69 B.P.H., 6,016 ft.

United Gas Pub. Ser. Co. No. 16 Rodessa Oil & Land Co., NE cor. NW NW sec. 22-23-16. Set 7-in. 5,994 ft.; T.D. 6,016 ft.

United Gas Pub. Ser. Co. No. 17 Rodessa Oil & Land Co., NW cor. sec. 22-23-16. Set 13⅜-in. 513 ft.; drlg. 2,223 ft.

United Gas Pub. Ser. Co. No. 18 Rodessa

Oil & Land Co., SW cor. NE SE sec. 15-23-16. Drlg. 2,866 ft.

United Gas Pub. Ser. Co. No. 19 Rodessa Oil & Land Co., SE cor. NE SE sec. 15-23-16. Set 13⅜-in. 315 ft.; drlg. 2,-196 ft.

United Gas Pub. Ser. Co. No. 20 Rodessa Oil & Land Co., SE cor. SE NE. Set 16-in. 313 ft.; drlg. 3,217 ft.

United Gas Pub. Ser. Co. No. 21 Rodessa Oil & Land Co., NE cor. SE NE sec. 15-23-16. Drlg. 4,091 ft.

United Gas Pub. Ser. Co. No. 22 Rodessa Oil & Land Co., NW cor. sec. 15-23-16. R.U.

Sabine Parish—Zwolle

Ellis Prod. Co. No. 1 Williams, 330 ft. S and W, NE cor. SE NE sec. 23-7-11. Tested dry; S.D.; W.O. 2,806 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSoto O. & G. Co. No. 1 C. R. Mower, 370 ft. S, 400 ft. W, NE cor. NW SW sec. 9-16-10. D.&A. 3,055 ft.

Bossier Parish

Geo. H. Bringhurst et al No. 1 Buckley NE SW sec. 36-21-13. Tested S.W. 2,-300 ft.; drlg. 2,309 ft.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Set 10-in. 66 ft.

United Gas Pub. Ser. Co. No. 1-A A. J. Murff, NW cor. sec. 17-17-11. Cg. 5,033 ft.

Caddo Parish

Bayou State Oil Corp. No. 4 Brown, SE cor. SE NE sec. 26-22-15. Comp. 1,000,-000 ft. gas, 960 ft.

Calatex O. & G. Co. No. 1 Hudson, NW SW sec. 8-16-16. O.W.D.D. from 2,970 ft.

Falcon Oil Co. No. 15 Deckson, NW SE sec. 27-20-15. P.B. 2,343 ft.; old T.D. 2,349 ft.

Jean et al No. 1 Hobbs, NE NE sec. 28-21-15. W.O.S.R. 1,669 ft.

Morris & Wooley No. 1 Pender, NW cor. SW sec. 11-20-15. Set 10-in. 60 ft.; drlg. 585 ft.

Press & Lambert No. 1 fee, SW cor. NE SE sec. 10-20-15. R.U.

Pyramid O. & G. Co. No. 1-A S. R. Wheeler, 1,320 ft. S, 1,500 ft. W, NE cor. sec. 16-18-16. Drlg. 3,962 ft.

Sport Oil Corp. No. 1-D Muslow, SE cor. sec. 5-20-15. Set 9⅝-in. 2,670 ft.

Caldwell Parish

Critchett & Woods No. 1 Kyles, NE cor. SW NE sec. 18-11-3e. P.B. to 1,300 ft.; old T.D. 1,740 ft.

Critchett & Woods No. 2 La. Cen. Lbr. Co., NW cor. NW SE sec. 18-11-3e. S.D.; rig repair, 1,002 ft.

Claiborne Parish

Triangle Drlg. Co. No. 1 Kilpatrick, 666 ft. N and E, C sec. 7-19-5. Drlg. 5,486 ft.

United Gas Public Service Co. No. 3 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. Cg. 6,483 ft.

Concordia Parish

Zeal Oil Co. No. 1 Young, 1,200 ft. W, 100 ft. N, SE cor. sec. 28-6n-8e. S.D. 1,120 ft.

De Soto Parish

S. S. Alexander No. 1 G. R. Steil, 330 ft. S and W, NE cor. sec. 5-12-16. S.D. 6,002 ft.

A. G. Halbach et al No. 1 Staton, 150 ft. N and E, SW cor. SE sec. 29-13-14. Drlg. 2,230 ft.

Larkin & Waar No. 1 Jackson, sec. 1-11-14. Cg. 5,163 ft.

R. C. Payne No. 1 Harris, NE cor. SW SE sec. 11-13-14. S.D. 1,200 ft.

Union Pet. Co. No. 1 Hill, sec. 3-10-13. S.D. 1,400 ft.

Franklin Parish

S. C. Jensen No. 1 Bailey, 660 ft. N and W of C sec. 12-11-6e. S.D. 800 ft.

Grant Parish

Acadian Prod. Corp. No. 7 Swope, NE cor. SE SE sec. 18-9-1e. Drlg. 550 ft.

Alexander et al No. 1 Maxwell, sec. 9-9-1e. W.O.S.R. 1,538 ft.

Taw Oil Co. No. 2 Bradford, sec. 16-9-1e. Drlg. 1,050 ft.

Taw Oil Co. No. 1 Bradford, NE cor. NW sec. 16-9-1e. Set 10-in. 60 ft.

La Salle Parish

Montague Oil Co. No. 7-A Zenonia Lbr. Co., NE cor. sec. 10-9-1e. Tested S.W. and W.O. 1,520 ft.

Lincoln Parish

Ark.-La. Gas Co. No. 1 C. E. Causey, NW cor. NE NW sec. 32-19-2w. D.&A. 4,-687 ft.

Caldwell Land & Timber Co. No. 1 J. K. Hammons, 330 ft. S and E, NW cor. SE SW sec. 30-18-1w. S.D. 640 ft.

Herman L. Brown et al No. 1 S. Gardner, 330 ft. N, 330 ft. E, SW cor. NW NE sec. 16-17-4w. Cg. 5,250 ft.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. Rigging up.

United Gas Pub. Ser. Co. No. 35 Crossett, sec. 22-21-4e. Comp. 5,000,000 ft. gas, 3,161 ft.

Red River Parish

I. J. Allen No. 1 Franklin Realty Co., sec. 29-11-9. Set 12½-in. 110 ft.; drlg. 500 ft.

Richland Parish

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 636 ft. E, SW cor. sec. 15-18-7e. S.D. 1,-370 ft.

Arthur Wray No. 1 Slocum, 2,436 ft. S, 560 ft. W, NE cor. sec. 10-17-6e. S.D. 1,676 ft.

Sabine Parish

I. J. Allen No. 1 Paul, sec. 24-9-14. R.U.

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. Set 8-in. 75 ft.

Posey Sisters Oil Co. No. 3 A. J. Burkett, SW cor. SE NE sec. 10-9-13. Set 10-in. 40 ft.; drlg. 500 ft.

Claude H. Smith No. 1 Whitney Corp., 330 ft. S, 990 ft. W, NE cor. sec. 19-10-13. Set 7-in. 1,514 ft.; T.D. 1,523 ft.

A. H. Tarver No. 2 Baker, NW cor. NE sec. 36-8-12. D.S. stuck 5,200 ft.

Lee Whitehurst No. 2 Latham, sec. 19-9-13. Set 7-in. 1,593 ft.; drlg. 2,056 ft.

Whitehurst & Myers No. 1 Paul, SE cor. SW sec. 24-9-14. Swbg. 1,940 ft.

Tensas Parish

H. M. Jones et al No. 1 Chicago Mill & Lbr. Co., NE cor. sec. 30-12-10e. S.D. 635 ft.

Union Parish

Boucher & Pace No. 1 Frost-Johnson, NE NE sec. 27-21-1e. Installing heavy rig 3,241 ft.

Carbons Consd. No. 1 Bird, SW cor. SE sec. 27-22-3e. Set 10-in. 202 ft.

J. E. Farrell No. 14 State, 1,319 ft. S, 3,168 ft. E, NW cor. sec. 33-21-4e. Comp. 7,000,000 ft. gas, 2,136 ft.

Southern Carbon Co. No. 68 fee, sec. 8-21-4e. Set 6-in. 2,098 ft.

United Gas Pub. Ser. Co. No. 3 Stovall, NE NW sec. 23-21-4e. Drlg. 100 ft.

Vernon Parish

Llano Del Rio Co. No. 2 Gulf Lbr. Co., 1,-285 ft. S, 1,000 ft. W, NE cor. sec. 7-1n-9w. Cg. 3,184 ft.

Webster Parish

J. L. Edwards No. 1 Hooper, 330 ft. S and E, NW cor. SW sec. 8-17-9. Fsg. for rotary slip, 2,155 ft.

J. P. Evans et al No. 1 T. Crichton, NE SE sec. 35-18-9. Drlg. 5,182 ft.

Ohio Oil Co. No. 1 R. L. Holloway, 660 ft. S, 760 ft. W, C sec. 23-21-10. Drlg. 7,102 ft.

SOUTH LOUISIANA FIELDS

Bayou Mallet—Acadia Parish

Superior Oil Co. No. 2 Bradley, sec. 47-7s-1e. Drlg. sh. 7,178 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 31 Watkins, sec. 8-12s-12w. T.D. 5,587 ft.; P.B. to 5,387 ft.; S.D.

Shell Pet. Corp. No. 33 Watkins, 65 ft. S and 4,243 ft. W of NE cor. sec. 12-12s-12w. T.D. 1,305 ft.; W.O.C.

Caillou Island—Terrebonne Parish

Texas Co. No. 33 State. Sd. 4,115 ft.; no report.

Texas Co. No. 34 State, sec. 34-23s-22e. Drlg. sh. and L. 4,369 ft.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 12 School Land sec. 16-14s-13w. T.D. 3,800 ft.; flowed 454 B.P.D. then went dead.

Burton Sutton Oil Co. No. 13 School Land, sec. 16-14s-13w. Drlg. sh. 4,443 ft.

Burton Sutton No. 14 School Land, sec. 16-14s-13w. Drlg.

Burton-Sutton No. 3-A School Land, sec. 16-14s-13w. Drlg. sd. and rock 2,500 ft.

Humble-Magnolia No. 16 Cameron Meadows. Drlg. sh. and sd. 4,628 ft.

Texas Co. No. 2 Miami Corp., sec. 15-14s-13w. Drlg. sd. and sh. 3,915 ft.

Cheneyville—Rapides Parish

Amerada Pet. Corp. No. 3 Weill, sec. 53-1s-2e. T.D. 5,719 ft.; cmtd. 7-in. csg.

Texas Co. No. 2 Weil, sec. 53-1ss-2e. T.D. 5,732 ft.; I.P. 240 B.P.D.: ¼-in. choke; T.P. 600 lbs.

Texas Co. No. 1 State (Andrade), sec. 5-1ss-2e. 10-in. csg. at 1,690 ft.; W.O.C.

Choctaw Dome—Iberville Parish

Standard Oil Co. No. 8 Myrtle Grove Wilburt, sec. 52-9s-11e. T.D. 5,828 ft.; P.B. to 2,450 ft. and sdtkd.; drlg. sdy. sh. 3,902 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 11 Community, sec. 32-10s-2e. Drlg. sh. 5,925 ft.

Humble O. & R. Co. No. 6 Gumble, sec 33-10s-2e. T.D. 6,167 ft.; P.B. to 3,017 ft.; sdtkd. at 3,027 ft.: drlg. sd. 6,082 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 3 State, sec. 5-22s-16e. Drlg. sd. and L. 6,826 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 5 State, sec. 24-21s-16e. Drlg. sd. 4,941 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 1 Frost, sec. 11-9s-8w. T.D. 7,650 ft.; prep. to wash in.

Union Sulphur Co. No. 1 J. A. Bel estate. T.D. 7,683 ft.; P.B. to 6,834 ft.; W.O.C.

Union Sulphur Co. No. 1 G. S. Cole, sec. 12-9s-8w. Drlg. sdy. sh. 6,655 ft.

Union Sulphur Co. No. 1 Green Acres, sec. 11-9s-8w. W.O.C. at 1,400 ft.

Union Sulphur Co. No. 6 Powell Lbr. Co., sec. 12-9s-8w. T.D. 6,715 ft.; W.O.C.

Union Sulphur Co. No. 7 Powell Lbr. Co., sec. 12-9s-8w. Cg. sd. and sh. 6,634 ft.

Hackberry—Cameron Parish

Calcasieu Oil Co. No. 6 Hansen, sec. 14-12s-10w. T.D. 5,793 ft.; pulling csg.

Gulf Ref. Co. No. 20 Irwin, sec. 13-12s-10w. T.D. 7,806 ft.; sdtkd. at 7,708 ft.

Stanolind O. & G. Co. No. 16-A School Land, sec. 16-12s-12w. Drlg. sh. 4,174 ft.

Stanolind O. & G. Co. No. 21-B Gulf Land sec. 14-12s-10w. S.D. 6,963 ft.; top salt 6,948 ft.; P.B. and sdtkd.: drlg. sh. 4,-471 ft.

Stanolind O. & G. Co. No. 23-B Gulf Land, sec. 14-12s-10w. Drk.

Sutton Oil Co. No. 3 Duhon, sec. 22-12s-10w. R.U.

Texas Co. No. 21 State, sec. 12-12s-10w. Drk.

Texas Co. No. 19-B State, sec. 13-12s-9w. T.D. 6,724 ft.; P.B.

Iowa—Jefferson Davis Parish

Shell Pet. Corp. No. 7 Stafford, sec. 18-9s-7w. T.D. 6,639 ft.; rmg. to make D. S.T.

Shell Pet. Corp. No. 1 Zimmerman. Cg. sh. 3,800 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 49-13s-9e. T.D. 6,653 ft.; I.P. 792 B.P.D.

Herton Oil Co. No. 2 Banta, sec. 40-13s-9e. R.U.

Herton Oil Co. No. 1 Carter, sec. 38-13s-9e T.D. 6,840 ft.; flowed 500 bbls. fluid per day 60% S.W.; to deepen.

Herton Oil Co. No. 3 Roane, sec. 40-13s-9e. T.D. 6,688 ft.; I.P. 36 B.P.H.; 5/16-in. choke; T.P. 1,000 lbs.; C.P. 1,025 lbs.

Jennings—Acadia Parish

Fred I. Getty No. 2 Jennings-Clements (W.O.), sec. 46-9s-2w. Drlg. sh. 2,152 ft.

Shell Pet. Corp. No. 1 Conover, sec. 40-9s-2w. T.D. 6,053 ft.; rmg.

Stanolind O. & G. Co. No. 16 Houssiere-Latrille, sec. 47-9s-2w. Drlg. sh. 4,642 ft.

Lafitte—Jefferson Parish

Texas Co. No. 4 Lafitte, sec. 20-17s-24e. Drlg. sh. and L. 7,249 ft.

Texas Co. No. 4 Rigolettes Fur Co., sec. 29-17s-24e. Drk.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State. Drlg. wtr. sd. 2,990 ft.

Texas Co. No. 39 State, sec. 20-12s-20e. Drlg. 3,753 ft.

Leesville—LaFourche Parish

Gulf Prod. Co. No. 8 Allen Land Co., sec. 21-21s-22e. T.D. 3,812 ft.; I.P. 397 B.P. D.; ¼-in. choke.

Lincoln Oil Co. No. 2 Constentine, sec. 27-21s-22e. Drlg. sd. and L. 5,006 ft.

Texas Co. No. 45 Leesville, sec. 34-21s-22e. Drlg. sd. 5,154 ft.

Texas Co. No. 46 Leesville, sec. 27-21s-22e. Drlg. sh. 2,900 ft.

Texas Co. No. 47 Leesville, sec. 27-21s-22e. Drk.

New Iberia—Iberia Parish

Canal Oil Co. No. 3 Sabatier, sec. 54-1s-7e. S.D. 3,180 ft.; in salt.

Kitos Oil Co. No. 2-A Sealey, sec. 56-12s-7e. S.D. 2,100 ft.

Teche Oil Co. No. 1 Schwing, sec. 52-12s-7e. Drlg. sh. 3,093 ft.

Texas Co. No. 1 Smith, sec. 72-12s-7e. Drlg. sd. and gravel 4,443 ft.

Roanoke—Jefferson Davis Parish

Gulf Oil Corp. No. 2-B Anding, sec. 2-9s-4w. R.U.

Humble O. & R. Co. No. 3 C. N. Taylor, sec. 12-9s-4w. Drlg. sh. 8,464 ft.

Humble O. & R. Co. No. 4-B Devilbiss, sec. 11-9s-4w. Drk.

Shell Pet. Corp. No. 5 Kratzer, sec. 12-9s-4w. Drlg. sh. 8,585 ft.

Port Barre—St. Landry Parish

Emerson Corp. No. 4 Sibille, sec. 29-6s-5e. T.D. 3,420 ft.; drlg. plug.

Pacheon Oil Co. No. 1 Gauden. Sec. 4-6s-6e. T.D. 3,718 ft.; perf. above 3,687 ft.; abd.

Pan American Prod. Co. No. 1 Watkins. S.D. 5,837 ft.

Texas Co. No. 1 Futral, sec. 20-6s-5e. Drlg. wtr. sd. 4,541 ft.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 18-11s-6e. Drlg. sh. 7,582 ft.

Tide Water Oil Co. No. 2 Smedes, sec. 57-11s-6e. T.D. 8,735 ft.; P.B. to 6,650 ft.: prep. to test.

Sorrento—Ascension Parish

Athens Oil Co. No. 4 United land, sec. 15-10s-4e. T.D. 4,332 ft.; 7-in. csg. at 4,291 ft.; prep. to drill plug.

Sorrento Oil Co. No. 1 Bernard, sec. 9-10s-4e. Derrick.

Starks—Calcasieu Parish

L. R. Welhite No. 1 Industrial Lbr. Co., sec. 19-9s-12w. Abd. 4,297 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 324 fee, sec. 20-9s-10w. Cg. rock 4,237 ft.

Union Sulphur Co. No. 322 fee, sec. 29-9s-10w. T.D. 3,328 ft.; I.P. 89 B.P.D.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 Hugh Breckenridge, sec. 29-7s-2w. Drk.

Continental Oil Co. No. 1 P. Johnson, sec. 30-7s-2w. Drlg. sh. 3,735 ft.

Continental Oil Co. No. 1 A. Ortego, sec. 29-7s-2w. T.D. 8,321 ft.; I.P. 298 B.P. D.; ¾-in. choke: T.P. 1,500 lbs.; C.P. 1,300 lbs.

Continental Oil Co. No. 1 Sonnier, sec. 29-7s-2w. Drlg. L. 7,263 ft.

Continental Oil Co. No. 1 Adras Young, sec. 29-7s-2w. T.D. 8,218 ft.; prep. to run csg.

General Crude Oil Co. No. 1 Vincent, sec. 31-7s-2w. Drlg. sh. 7,184 ft.

Loffland Bros. No. 1-A L. C. Bowles, sec. 28-7s-2w. T.D. 8,380 ft.; S.W. sd. 8,363-80 ft.; S.D.

Loffland Bros. No. 1-B L. C. Bowles, sec. 23-7s-2w. Drlg. sh. 7,548 ft.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. Drk.

Wilson Broach No. 19 Wilson Strip, sec. 33-10s-12w. Drlg. sdy. sh. 3,462 ft.

White Castle—Iberville Parish

Shell Pet. Corp. No. 3 Shingle, 650 ft. S, 600 ft. E of NW cor. sec. 12-11s-12e. Drlg. sd. 1,053 ft.

S. LOUISIANA WILDCATS

Acadia Parish

Limited Oil Co. No. 1 Miller, sec. 47-8s-3e. Drlg. sh. and shell 3,914 ft.

Magnolia Pet. Co. No. 1 Homeseekers Dev. Co., sec. 54-10s-1w. Drlg. sh. 2,746 ft.

Allen Parish

Humble O. & R. Co. No. 1 J. A. Bell, sec. 28-6s-7w. Drlg. sh. 5,057 ft.

Avoyelles Parish

Frost Oil Co. No. 1 Hinds Lbr. Co., sec. 3-3n-4e. R.U.

Cameron Parish

Magnolia Pet. Co. No. 1 Hebert, sec. 13-12s-9w. Drlg. sh. 2,027 ft.

East Feliciana Parish

East Feliciana Oil Co. No. 1 Rider, sec. 58-1s-1w. Drk.

West Feliciana Parish

R. L. Morris (C. L. Thompson) No. 1 Percy, sec. 89-1s-4w. Abd. 6,058 ft.

Iberia Parish

Jefferson Lake Oil Co. No. 1 State, Twp. 12s-5e. T.D. 8,610 ft.; preparing to test through perforation 8,452-79 ft.

Jefferson Lake Oil Co. No. 322 State Lake Pleigneur. Drlg. sh. 5,900 ft.

Jefferson Davis Parish

J. K. Lewis No. 1 Lockmore, sec. 32-7-6. Abd. 7,095 ft.

Shell Pet. Corp. No. 1 Lacassan, sec. 20-11s-5w. T.D. 9,802 ft.; P.B. to 8,176 ft.; drlg. sd. 8,946 ft.

Livingston Parish

Bunte O. & G. Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

Plaquemines Parish

Venice Corp. No. 1 Manhattan L. & F. Co., sec. 26-21s-29e. S.D. 3,512 ft.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, sec. 5-12s-5e. Cg. sd. 6,631 ft.

St. Landry Parish

Limited Oil Co. No. 1 Miller Est., sec. 47-8s-4e. Bldg. fdns.

St. Martin Parish

Southern Oil (S. C. Yingling et al) No. 1 State, sec. 13-9s-8w. T.D. 3,172 ft.; tested S.W.: pulling csg. to deepen.

Texas Co. No. 2 State, sec. 14-10s-9e. Driving piling.

Texas Co. No. 8 St. Martins Land, sec. 17-8s-7e. Cg sd. 5,144 ft.

S. C. Yingling et al No. 2 State, sec. 13-9s-8w. Driving piling.

Vermillion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. 13-in. csg. at 1,822 ft.; W.O.C.

TEXAS

Week Ending April 25

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 6 Hardy, Wm. Smeathers Sur. T.D. 3,227 ft.; P.B. to 3,215 ft.; swbd. dry and S.D.

Byron Mound—Brazoria County

Texas Co. No. 3 Freeport Sulphur Co., C. Areola Sur. Drlg. sh. and L. 3,890 ft.

Damon Mound—Brazoria County

Sinclair Prairie Oil Co. No. 23 Jackson, H. Darst Sur. Drlg. 870 ft.

Hastings—Brazoria County

Humble O. & R. Co. No. 6 Cannon, H.T. &B. Sur. T.D. 6,060 ft.; I.P. 25 B.P.H.: ¼-in. choke: T.P. 800 lbs.: C.P. 850 lbs.

Stanolind O. & G. Co. No. 3 J. W. Miller, A.C.H.&B. Sur. No. 2. Drlg. sh. 6,046 ft.

Stanolind O. & G. Co. No. 1 Brown, H.T. &B. Sur. Drk.

Stanolind O. & G. Co. No. 2 Brown, H.T. &B. Sur. No. 29. Drlg. sd. 5,864 ft.

Stanolind O. & G. Co. No. 3 Cannon, H. T.&B. Sur. No. 36. Drlg. sd. and L. 3,-856 ft.

Stanolind O. & G. Co. No. 1 Jimmie Sneed, Jimmie Sneed Sur. Drlg. sh. 4,720 ft.

Stanolind O. & G. Co. No. 4 B. L. Turney, A.C.H.&B. Sur. No. 1. T.D. 6,080 ft.; I.P. 351 B.P.D.; ¼-in. choke; T.P. 875 lbs.; C.P. 675 lbs.

Stanolind O. & G. Co. No. 5 B. L. Turner, A.C.H.&B. Sur. No. 1. Drk.

Stanolind O. & G. Co. No. 4 Williams, A.C.H.&B. Sur. No. 1 Drlg. L. and sh. 2,856 ft.

Stanolind O. & G. Co. No. 4 Wooster, A. C.H.&B. Sur. No. 1. W.O.C. at 90 ft.

Manvel—Brazoria County

Texas Co. No. 2-B Belcher, H. N. Little Sur. T.D. 5,150 ft.; 7-in. csg. 5,125 ft.; I.P. 500 B.P.D.; ¼-in. choke; C.P. 750 lbs.

Texas Co. No. 21-B Belcher, H. N. Little Sur. T.D. 5,150 ft.; 7-in. csg. at 5,125 ft.; drlg. plug.

Texas Co. No. 21 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91. T.D. 3,965 ft.; 7-in. csg. at 3,911 ft.; making dry gas; T.P. 1,525 lbs.

Texas Co. No. 5 O. L. Rash, T. Sproggins Sur. Drlg. sh. 4,089 ft.

Uscan Oil Co. No. 1 Wilson, H.T.&B. Sur. No. 23. T.D. 4,030 ft.; P.B. to 4,000 ft.; 7-in. csg. 4,015 ft.; washing from 4,-003-10 ft.

Anahuac—Chambers County

Humble O. & R. Co. No. 10 Clark, H.&T. C. Sur. Drlg. sh. and L. 4,502 ft.

Humble O. & R. Co. No. 12 Engels, sec. 50, H.&T.C. Sur. Drlg. sh. and sd. 3,-736 ft.

Humble O. & R. Co. No. 2 Grippon, H.&T. C. Sur. Drlg. sh. and L. 6,221 ft.

Humble O. & R. Co. No. 2 Marshall, H.& T.C. Sur. Drlg. sdy. sh. 6,994 ft.

Humble O. & R. Co. No. 2 Tyrell, H.&T. C. Sur. 10¾-in. csg. at 1,507 ft.; drlg. sh. 3,165 ft.

Humble O. & R. Co. No. 6 Tyrell, H.&T.C Sur., sec. 52. T.D. 7,085 ft.; 7-in. csg. at 7,040 ft.; I.P. 28 B.P.H.; ¼-in. choke; T.P. 1,050 lbs.; C.P. 1,050 lbs.

Humble O. & R. Co. No. 9 White, James McGahey Sur. Drlg. sh. and sd. 5,832 ft.

Sun Oil Co. No. 11 White, J. McGahey Sur. T.D. 7,084 ft.; 7-in. csg. at 7,036 ft.

Sun Oil Co. No. 12 White, James McGahey Sur. T.D. 7,084 ft.; I.P. 29 B.P.H.; ¼-in. choke; C.P. 1,200 lbs.; T.P. 1,150 lbs.

Sun Oil Co. No. 13 White, James McGahey Sur. R.U.

Barbers Hill—Chambers County

Sinclair Prairie No. 19 Wilburn, Henry Griffith Sur. W.O.C. 5,266 ft.

Stanolind O. & G. Co.'s No. 29 Chambers Wm. Bloodgood Sur. Derrick.

Cotton Lake—Chambers County

Salt Dome Oil Co. No. 1 A. B. Lawrence, Solomon Barrow Sur. Drk.

Salt Dome Oil Co. No. 2 Lawrence, T.D. 6,661 ft.; production dropped; started making S.W.; pulling screen to deepen.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 2 Middleton, M. A. Carroll Sur. T.D. 6,609 ft.; rng. csg.

Stanolind O. & G. Co.-State No. 1 Turtle Bay, T.D. sdtkd. hole 6,618 ft.; rng. csg.

Stanolind O. & G. Co. No. 2 State, Drk.

Big Creek—Fort Bend County

Gulf Oil Corp. No. 68 Davis, M. Young Sur. Drlg. sh. 4,510 ft.

Blue Ridge—Fort Bend County

Ben Barnett No. 1 Blakely, E. Drew Sur. T.D. 2,058 ft.; R.U. to pump.

Mills Bennett No. 4 Lascher, T. Habermacher Sur. Drlg. sh. 5,412 ft.

Trans State Oil Co. No. 3 Blakely, E. Drew Sur. Rig.

D. M. Wallace and Woodley Pet. Co. No. 2 Blakely, E. Drew Sur. T.D. 3,963 ft.; P.B. to 3,938 ft.; tested S.W.; P.B. to 2,993 ft.; to sidetrack.

Orchard—Fort Bend County

Gulf Prod. Co. No. 44 Moore, Lee Burknapp Sur. Drlg. sh. and shells 5,948 ft.

Gulf Ref. Co. No. 45 Moore, German Immigration Sur. No. 3. Sd. 6,766 ft.; S.D.

Gulf Oil Corp. No. 4-A Moore, J. Fraser Sur. Rock 685 ft.; abd.

High Island—Galveston County

Stanolind O. & G. Co. No. 5 B.&N.O., Fitzsimmons Sur. T.D. 6,477 ft.; P.B. 5,795 ft.; 7-in. csg. at 5,756 ft.; P.B. to 5,785 ft.; pulling screen.

Stanolind O. & G. Co. No. 54 Cade, W Fitzsimmons Sur. T.D. 5,580 ft.; P.B. to 5,575 ft.; I.P. 473 B.P.D.; ¼-in. choke.

Stanolind O. & G. Co. No. 55 Cade, Wm. Hudson Sur. T.D. 5,126 ft.; drlg. plug.

Stanolind O. & G. Co. No. 56 Cade, N. Fitzsimmons Sur. Drk.

Stanolind O. & G. Co. No. 1 Cooper, M. Dunman Sur. Bldg. drk.

Stanolind Oil & Gas Co. No. 12-B Smith Royalty, M. Dunman Sur. Drlg. sdy. L. 4,362 ft.

Dickinson—Galveston County

Humble O. & R. Co. No. 2 Magle, J. S. Jones Sur. T.D. 8,040 ft.; rng. 7-in. csg.; perf. from 7,989-8,001 ft.; flowing into pits; no gauge.

Humble O. & R. Co. No. 3 E. E. Townes, J. S. Jones Sur. Bldg. foundations.

Humble O. & R. Co. No. 2-B Bayou Dev. Co., J. Seliers Sur. T.D. 9,107 ft.; P.B. to 8,313 ft.; W.O.C.

Humble O. & R. Co. No. 7-A Stewart, J. Seliers Sur. T.D. 8,035 ft.; 7-in. csg. at 8,017 ft.; W.O.C.

Ken Ben Oil Co. No. 1 Stewart, W. K. Wilson Sur. Drlg. sh. 4,027 ft.

Pure Oil Co. No. 3 Shelar, B.B.B.&C. Sur. T.D. 8,053 ft.; 7-in. csg. 8,035 ft.; swbd. fluid level at 3,000 ft.; 1,300 lbs. gas pressure; prep. to W.O.

Stanolind O. & G. Co. No. 4 State, Tr. No. 3. T.D. 2,028 ft.; 13⅜-in. csg. at 2,026 ft.

Stanolind O. & G. Co. No. 5 State, Tract 3. T.D. 6,730 ft.; P.B. to 6,410 ft.; drlg. sh. 6,460 ft.

Saratoga—Hardin County

John Deering No. 1 Teel, Thomas Gaines Sur. Rig.

Pierce Junction—Harris County

Gulf Oil Corp. No. 3 Manchester, J. A. Williams Sur. Drlg. sh. 4,162 ft.

Harrison and Abercrombie No. 8 Ritter J. Hamilton Sur. T.D. 5,535 ft.; P.B. 3,300 ft.; drlg. sd. and sh. 4,180 ft.

Mykawa—Harris County

West Prod. Co. No. 9 Irwin, W. B. Walker Sur. Sdy. sh. 4,836 ft.; no report.

West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. R.U.

South Houston—Harris County

Dick Schwab No. 1 T. Bennett, H.T.&B. Sur. No. 6. T.D. 4,012 ft.; oil sd.; rng. csg.

Smith & McDannald No. 1 R. R. Reynolds, H.T.&B. Sur. No. 6. T.D. 3,970 ft.; 7-in. csg. at 3,945 ft.; I.P. 427 B. P.D.; ¼-in. choke.

Stanolind O. & G. Co. No. 1 W. A. Griffin, H.T.&B. Sur. No. 6. Cellar.

Stanolind O. & G. Co. District No. 30, H. T.&B. Sur. T.D. 4,602 ft.; 7-in. csg. at 4,567 ft.

Sterling O. & R. Co. No. 2 Summers, H. T.&B. Sur. No. 6. T.D. 4,808 ft.; 5-in. csg. at 4,800 ft.; I.P. 430 B.P.D.; ¼-in. choke; T.P. 500 lbs.

Tomball—Harris County

Humble O. & R. Co. No. 4 Gassett, B. Smith Sur. T.L. 5,562 ft.; 7-in. csg. at 5,545 ft.; I.P. 6 B.P.H.; ¼-in. choke; T.P. 175 lbs.; C.P. 525 lbs.

Humble O. & R. Co. No. 1 Holderrath, C. N. Pillot Sur. 10¾-in. csg. 925 ft.; drlg. sh. 1,374 ft.

Humble O. & R. Co. No. 2 Mahaffey, J. Pruitt Sur. Rig.

Humble-Magnolia No. 13 J. D. Reid, C. Goodrich Sur. Drlg. sh. at 2,910 ft.

Humble O. & R. Co. No. 1 Townsite area, J. House Sur. T.D. 5,591 ft.; 7-in. csg. at 5,586 ft.; I.P. 12 B.P.H.; ¼-in. choke; T.P. 315 lbs.; C.P. 800 lbs.

Humble O. & R. Co. No. 7-A Quilter, Sonchell Sur. T.D. 5,560 ft.; rmg.

Manvits—Jackson County

Shell Pet. Corp. No. 3 C. F. Combs, Morris & Cummings Sur. Drlg. sh. 4,895 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 2 Guinn, C. Williams Sur. Drlg. sd. and shells 5,-771 ft.

Humble O. & R. Co. No. 2 R. C. Miller, A. Savery Sur. T.D. sdtkd. hole 6,881 ft.; abd.

Humble O. & R. Co. No. 1 Pinchback, C. Williams Sur. 16-in. csg. 219 ft.; T.D. 222 ft.

Glenn McCarthy No. 2 Bessie Longe, H. Williams Sur. T.D. 5,581 ft.; started flowing oil and S.W.; caught fire; record time.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2-A Pipkin and Davis, Wm. McFaddin Sur. Drlg. sh. and shells 3,615 ft.

Fannett—Jefferson County

Gulf Oil Corp. No. 18 Thomas, W. H. Smith Sur. Drlg. L. rock 5,317 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 14-C Kirby, C. J. Pleasant Sur. Drlg. sd. 5,920 ft.

Esperson—Liberty County

Crown Pet. Co. No. 1 Davis, D. Kokernot Sur. Cg. sh. 6,090 ft.

General Crude Oil Co. No. 14 Davis, D. Kokernot Sur. Drlg. sh. and shell 4,-116 ft.

General Crude Oil Co. No. 15 Davis, D. L. Kokernot Sur. Drk.

General Crude Oil Co. No. 24 Esperson, Wm. Bloodgood Sur. Drlg. sd.; S.O. at 2,683 ft.

General Crude Oil Co. No. 25 Esperson, Wm. Bloodgood Sur. T.D. 2,801 ft.; I.P. 500 B.P.D. on pump.

Hankamer—Liberty County

Gulf Oil Corp. No. 24 Boyd, Amos Allen Sur. Drlg. sd. 4,279 ft.

Gulf Oil Corp. No. 6 Crew and Jacobs, H.T.&C. Sur. No. 21. T.D. 5,380 ft.; P.B. to 3,675 ft.; W.O.C.

Uscan Oil Co. No. 5 Esnell, Levi Barrow Sur. Spudded.

Hardin—Liberty County

Atlantic Oil & Prod. Co. et al No. 1 Hardy, James Robinson Sur. S.D. 8,057 ft.; stky. sh.

Van Vleck—Matagorda County

Skelly Oil Co. No. 1 Langham, M. Cummings Sur. Drlg. sh. 6,490 ft.

Skelly Oil Co. No. 1 Rugeley, I.&G.N. Sur. No. 267. 13⅜-in. csg. at 1,417 ft.; W.O.C.

Skelly Oil Co. No. 6-B Kobb, M. Cummings Sur. 13⅜-in. csg. at 1,400 ft.; W.O.C.

Conroe—Montgomery County

Humble O. & R. Co. No. 13 Dobbin, Ransom House Sur. T.D. 5,050 ft.; prep. to set csg.

Sun Oil Co. No. 18 Foster, C. B. Stewart Sur. T.D. 5,082 ft.; 7-in. csg. at 5,000 ft.; I.P. 20 B.P.H.; ¼-in. choke.

Sun Oil Co. No. 26 Foster, Drlg. sh. 4,-444 ft.

Orange—Orange County

Texas Canadian Oil Co. No. 1 Bland, James Dyson Sur. Drlg. sh. 2,600 ft.

Port Neches—Orange County

Texas Co. No. 6-B Polk, J. Beaumont Sur. T.D. 6,952 ft.; sdtkd. from 4,447-4,559 ft.

Greta—Refugio County

Hewitt & Daugherty No. 23 Lambert, Hardwick Sur. Drlg. sh. 5,800 ft.

United Gas Co. No. 23 Lambert, Hardwick Sur. T.D. 5,852 ft.; I.P. 174 B.P. D. through 3/16-in. choke.

United Gas Co. No. 24 Lambert-Hardwick Sur. Drlg. sh. 3,550 ft.

Refugio—Refugio County

Sorey et al No. 1 Cable, Refugio townsite. T.D. 3,694 ft.; jetting 60 bbls. oil and 300 bbls. of S.W. per day.

United Gas Co. No. 17 Fox Hows Survey T.D. 6,359 ft.; 5-in. csg. 6,248 ft.; tested S.W.; recmtd.; W.O.C.

Tomoconnor—Refugio County

Quintana Pet. Corp. No. 34-A Tom O'Connor, Swisher Sur. Cg. 5,718 ft.

Colette Creek—Victoria County

American Liberty Oil Co. No. 3 Gaughler, R. Manchola Sur. Drlg. sh. 2,780 ft.

Keeran—Victoria County

Gulf Oil Corp. No. 3 Keeran, DeLeon Sur. S.D. 5,246 ft.

Placedo—Victoria County

Barnsdall-Fairmont No. 4 Pickering, A. Murray Sur. T.D. 4,773 ft.; I.P. 99 bbls. in 10 hrs.

Barnsdall-Costa No. 3 Wheless, S.A.&M. G. Sur. No. 8. Drlg. sh. 4,730 ft.

Benson-Jones No. 1 J. A. Janis, W. Rupley Sur. Drlg. sh. at 4,072 ft.

Crown Central Oil Co. No. 2 Gebrover, J. M. Bronson Sur. Drlg. sh. 4,390 ft.

Eastern Texas Pet. Co. No. 1 J. Hasek, S.A.&M.G. Sur. T.D. 4,773 ft.; D.S.T. from 4,760-73 ft.; recovered 720 ft. of oil; rng. csg.

Harrison & Abercrombie No. 1 C. O. Voss J. M. Bronson Sur. T.D. 4,763 ft.; I.P. 225 bbls. in 18 hrs.; ¼-in. choke: T.P. 735 ft.

Sun Oil Co. No. 2 Schneeder, Wm. Rupley Sur. 10¾-in. csg. at 850 ft.

Clay Creek—Washington County

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. Drlg. sh. 2,820 ft.

Louise—Wharton County

Pure Oil Co No. 1 Rivers, sec. 19, T.D. 5,158 ft.; 7-in. csg. on bottom; I.P. 147 B.P.D.

Pickett Ridge—Wharton County

Texas Co. No. 2 Marek, George Reynolds Sur. Drlg. sh. 1,352 ft.

Texas Co. No. 14-A Pierce, I.&G.N. Sur. No. 39. T.D. 4,059 ft.; 10-in. csg. at 1,306 ft.

Texas Co. No. 17-A Pierce, I.&G.N. Sur. Drlg. sh. and L. 4,331 ft.

Texas Co. No. 18-A Pierce, I.&G.N. Sur. Drlg. sh. and L. 3,360 ft.

Withers—Wharton County

Texas Co. No. 1-B Pierce, E.T. R.R. Sur., Abst. No. 108. Drlg. sh. 5,009 ft.

Texas Co. No. 4-C Pierce, J. Caldwell Sur. Drlg. sh. 5,540 ft.

Texas Co. No. 5-C Pierce, C. J. Caldwell Sur. Drlg. sh. and L. 3,668 ft.

GULF COAST WILDCATS

Brazoria County

Gulf Oil Corp. No. 1 Fairfield, A. Robinson Sur. Cd. sdy. sh. 7,879 ft.

Strake Oil Corp. et al No. 1 D. K. Poole J. W. Hardin Sur. Washing over stuck D.S.

Texas Gulf Prod. Co. No. 1 Sparks, S.D. 3,937 ft.

Chambers County

Glenn H. McCarthy No. 1 Pitt, J. M. Duran Sur. T.D. 6,000 ft.; pulled in drk.

Calhoun County

Continental Oil Co. No. 2-A American Realty Co., Pedro Garcia Sur., Lot 1, Blk. "C." T.D. 9,082 ft.; abd.

Humble O. & R. Co. No. 2 Welder, Jose Maria Rios Sur. No. 1. Drlg. sdy. sh. 2,002 ft.

Fayette County

Ben G. Barnett No. 1 McKinnon, A. Zumwalt Sur. Drlg. sh. 2,190 ft.

Galveston County

Coastal Mineral Dev. Co. No. 1 Joslin, Sarah McKissick Sur. 10¾-in. csg. 1,-410 ft.; drlg. sh. 3,730 ft.

Sun Oil Co. No. J. D. Hughes, W. M. C Baker Sur. T.D. 5,613 ft.; sdtkg. at 5,-388 ft.

Grimes County

Crook Bros. No. 1 W. W. and J. C. Grair, S.D. 268 ft.

Hardin County

Jack Frazier No. 1-A Olive Sternberg, J. Houston Sur. Drlg. sh. 1,160 ft.

S. Hindman No. 1 Howth, A. J. Cotton Sur. Drlg. sh. 3,030 ft.

David B. MacDaniel No. 1 Nona Mills, E. E. Manvel Sur. Drlg. sh. 3,030 ft.

Harris County

Amerada Pet. Corp. et al No. 1 Dopslon C.W.R.R. Sur., Blk. 1, sec. 2. T.D. 1,-381 ft.; 13-in. csg. at 1,378 ft.

Amerada Pet. Corp. No. 1 Nellie Esperson, George Patrick Sur. Cg. sh. with sd. streaks 5,455 ft.

Bunte O. & G. Co. No. 1 Lobit et al, Benjamin Barrow Sur. Drk.

Jefferson County

Magnolia Pet. Co. No. 1 Punches, sec. 16, H.T.&B. Sur. Drlg. sh. 6,300 ft.

Sun Oil Co. No. 1 Herbert & Broussard B. Blackman Sur., Abst. No. 2. T.D. 8,-824 ft.; P.B. to 7,085 ft.; prep. to set whipstock.

Matagorda County

Continental Oil Co. No. 1 Feife, J. & Criswell Sur. T.D. 7,629 ft.; P.B. to 6,814 ft.; prep. to W.O.

John Deering No. 1 Estelle, Tone and Jameson Sur. S.D. 6,788 ft.

Helmerich & Payne, No. 1 Hawkins, D McCarthy Sur. T.D. 7,816 ft.; perf. csg. 6,250-70 ft.; prep. to test.

Sun Oil Co. No. 1 Craig, Thomas Williams Sur. T.D. 5,999 ft.; cmtd. back from 5,-405-5,231 ft.; rmg. at 5,781 ft.

Montgomery County

Chapman and Smith No. 1 Delta Land & Timber Co., T. Shepperd Sur. No. A-481, S.D. 4,012 ft.

Mid-Texas Oil Co. No. 1 Security Trust, G. W. Loonin Sur. Drlg. bldrs. 1,663 ft.

Wm. Thompson et al No. 3 Scott, F. A. Wheeler Sur. Cg. at 3,000 ft.

Victoria County

Rowan-Hope No. 1 Scheel, J. M. Escallera Sur. S.D. at 4,011 ft.

Wharton County

Pure Oil Co. No. 1 Paige, James Pirie Sur T.D. 9,200 ft.; rmg. at 8,361 ft.; prep. to drill ahead; 6⅝-in. csg. at 8,500 ft.

Sterling O. & R. Co. No. 1 Agnes Geaser, J. Scott Sur. S.D. 3,265 ft.

S. W. TEXAS WILDCATS

Aransas County

Buckingham Oil Co. No. 1 McCampbell, sec. 41-42, James Arids Sur. T.D. 7,501 ft.; oil flow through D.S. mudded off; cutting out D.S.

Atascosa County

Atascosa Trust No. 1 Domsch, 160 ft. S line, 300 ft. E line, 152-ac. lease, J. T. Russell Sur. 1,222. Drlg. 3,477 ft.

Bee County

Marine Oil Co. No. 1 Hearn, 2,000 ft. N No. 1 Words, E. Ryan Sur. T.D. 5,816 ft.; D.&A.

Marine Oil Co. No. 1 Ray, 360 ft. N line, 330 ft. N line, 40-ac. tr., Anna Birks Sur. Drlg. 3,623 ft.

H. A. Pressey No. 1 Hicks, 1,450 ft. of S line, 150 ft. of W line, lease, J. Urrutia grant. S.D. 3,468 ft.

Brooks County

California Co. No. 1 B. Garcia, 465 ft. N and W lines lease, B. Garcia tract, Salinas Sur. Cg. 5,656 ft.

Burleson County

Walter Blumenthal No. 1 Crane, W. C. Pierce Sur. No. 397. T.D. 6,328 ft.; P.B. 6,320 ft.; S.D.

Dewitt County

Universal Oil, Gas & Mining Co. No. 1 Schnebel, 330 ft. S and W lines tr., Fitzgerald Sur. Drlg. 1,383 ft.

Duval County

C. G. Glasscock No. 1 Milano Land & Garden Co., Sur. 87. Drlg. 2,195 ft.

Frank Gravis No. 1 C. K. Gravis, 1,650 ft. SE line, 990 ft. SW line, Sur. 250. Cg. 4,617 ft.

Hamil & Smith No. 1 Hubbard, sec. 69. Drlg. 2,370 ft.

Kepley Prod. Co. No. 1 Sevier, 330 ft. S line, 1,320 ft. E line, Sur. 71. T.D. 3,-410 ft.; D.&A.

Magnolia Pet. Co. No. 1 Gray ranch, 330 ft. S and E lines, Sur. 566, Cg. 3,014 ft.

Cabilde Oil Corp. No. 1 Tinney, Sur. 4. Drlg. 3,071 ft.

Santa Clara Oil Co. (Atkins & O'Neill) No. 1 W. Serna, 330 ft. S and E lines, sec. 521, Loc.

Stanolind O. & G. Co. No. 3 Farmers Life Ins. Co., 330 ft. S and E lines, Sur. 559, T.D. 3,512 ft.; S.W. sd.; stdg.; W.O.O.

Edwards County

Paul Texas No. 1 Stewart, C SE¼ sec. 1 G.C.&S.F. Sur. Drlg. sh. 5,262 ft.

Goliad County

Cotton Belt O. & G. Co. No. 1 Lutzenbacher, 330 ft. S and W lines, Blk. 21, Goliad townsite. Sd. 5,544-46 ft.; blow out and bridged; stdg.

Magnolia Pet. Co. No. 1 Tipton, 330 ft. SE and SW lines, Thorman Sur. Drlg. 3,522 ft.

Gonzales County

Tull et al No. 1 Boska, 800 ft. S and E lines tr., McClure Sur. T.D. 1,956 ft.; stdg.

Guadalupe County

Paul Armstrong and J. E. Clark No. 1 Brodnaux, 150 ft. SE cor. 36-ac. tr., King Sur. Drlg. 2,421 ft.

J. E. Clark No. 1 Anderson, Green De Witte Sur. Drlg. 109 ft.

J. E. Clark No. 1 Williams, DeWitte Sur. Drlg. 1,031 ft.

Hidalgo County

Gerald O. & G. Co. No. 1 Nelson Mortgage Co., Blk. 38, Lot A, LaDonna Tr. Drlg. 1,727 ft.

Gulf States Oil Co. No. 3 John Engleman, Lot 3, Blk. 70. Drlg. 5,937 ft.

Quintana Petroleum Co. No. 1 John C. Engleman, Lot 10, Blk. 94, Las Mestanas grant. Cg. sh. 7,935 ft.

Jim Hogg County

French Oil Co. No. 2 Rodriguez, Sh. 3. Sur. 579, El Reyoto grant. T.D. 700 ft.; stdg.

S. L. Miller No. 2 Yeager, 777 ft. S line, 150 ft. E line, Blk. 6, Sur. 20. Drlg. 2,623 ft.

Jim Wells County

Gist & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines, Sur. 151. Spudded.

G. M. Richardson No. 1 Garrett, 1,980 ft. S line, 1,640 ft. E line, sec. 5. Drlg. 5,810 ft.

Texon Roy. Co. and Lucey No. 1 Rolston, 330 ft. N and W lines, sec. 17, King Farm Lots. D.S.T. at 5,380-90 ft.; 1,000 ft. oil in 15 min.; W.P. 40 lbs.; setting screen and lnr.

Karnes County

DeGraffe & Reele No. 1 Cochran, 460 ft. E line, 160 ft. S line, McConnell League. Spudded in.

Kerr County

Eastland Oil Co. No. 7 Love, 660 ft. N Evans & Gant No. 1 Love, Martinez Sur No. 1,594. Cmtng. off cavity; T.D. 1,850 ft.

LaSalle County

Davenport & Talbott No. 1 Watkins, 1,610 ft. S line, 330 ft. E line, Sur. 103. Drlg. 2,730 ft.

Paul Meader No. 1 Reed, sec. 136. Drlg. 1,910 ft.

Live Oak County

W. A. Brooks No. 1 Terrill, 1,000 ft. NE R.R., 1,500 ft. S line lse., Juan Houligan Sur. Drlg. 923 ft.

Dirks Bros. et al No. 1 Agnes Troell, 330 ft. SE and SW lines, 418-ac. tr., Thos. Pen Sur. Set sur. csg.; W.O.C.

R. H. Feltner No. 1 J. T. Carter, 1,847 ft. NW line, 350 ft. NE line, 120-ac. tract, sec. 319. T.D. 3,466 ft.; setting whipstk. to sdtk.

Inter-Allied Pet. Co. No. 1 Aetna Life Ins. Co., 660 ft. NW and SW lines, Pointevent Sur. 3, Abst. 336. M.I.M.

McMullen County

John F. Camp No. 1 Byrne, 450 ft. NE line, 1,044 ft. SE line, 100-ac. tr., B. Odem Sur. Drlg. 490 ft.

R. J. Hill No. 1 Richardson, Sur. 158. Set sur. csg.; drlg. 1,017 ft.

Magnolia Pet. Co. No. 2 Kincaid, 330 ft. S and E lines, Sur. 86. Sd. 1,810-22 ft.; tested gas; cg. 3,092 ft.

Rainer Oil Co. No. 1 Hagist, 330 ft. S and W lines, SW¼, SE¼, Sur. 25. Loc.

V. G. Schimmell No. 3 Two Rivers ranch, 330 ft. S and W lines, Sur. 58. Drlg. 347 ft.

Nueces County

O. W. Killam No. 1 Carter, 330 ft. N and W lines, Carter tr., Wright Subd. Drlg. 5,663 ft.

O. W. Killam No. 1 Ellick, 330 ft. N and E lines tr., sec. 109, Paul Subd. Spudded.

Terminal Oil Prod. Co. No. 1 Thurman, 660 ft. N and W lines, SW¼, sec. 10. Drk.

G. M. Richardson No. 1 Gerhardt, 660 ft. E line, 330 ft. N line, sec. 79. Drk.

Santa Clara Oil Co. (Atkins & O'Neil) No. 1 Cooke, 990 ft. N line, 330 ft. W line, sec. 14. Drlg. 5,965 ft.

San Patricio County

Benedum & Trees Oil Co. No. 1 Jones, 1,650 ft. E line, 990 ft. S line, NW¼ sec. 65. Cg. 5,257 ft.

Benedum & Trees Oil Co. No. 2 Welder, sec. 19. T.D. 6,116 ft.; recmtg.

Potrero Oil Co. No. 1 Welder, 2,000 ft. N and W lines, sec. 37. Drlg. 5,325 ft.

Willis Storm No. 1 Nancy Hobbs, 622 ft. NW and SW lines, 30-ac. tr. Drlg. 6,537 ft.

Texon Drlg. Co. No. 1 Rambo, 330 ft. W line, 466 ft. N line, Lot 6, sec. 35. Drlg. 4,159 ft.

Starr County

J. F. Anderson No. 1 Yzaguirre, Tr. 1, Porc. 79, J. of Camargo. T.D. 320 ft.; S.D.

Coreta Oil Co. No. 1 Pena, 150 ft. S and E lines, Sh. 80, Porc. 81. R.U.

O. W. Killam No. 1 Sanford Ricaby, 330 ft. W line, Porc. 83, J. of Camargo, 300 ft. S of Highway 4. Loc.

Kingwood Oil Co. No. 1 Guerra & Son, 330 ft. NE line, 405 ft. SE line, Blk. 35, Porc. 56. No report.

Larkin & Warr No. 1 Kelsey-Bass, 533 ft. N line, 408 ft. E line, Lot 8, Porc. 87. M.I.M.

Ed Leach No. 1 Wood Est., 300 ft. W line E 3/7 Porc. 84. Loc.

Webb County

Austin & Vernon's No. 1 Jeffries, 150 ft NE line 1,170 ft. SE line, Blk. 13, Sur. 1,453. S.D. 1,436 ft.

Willacy County

Shell Pet. Corp. No. 1 Yturria Land & Cattle Co., 990 ft. S and E lines, Share 64, San Juan de Carricitos grant. Drlg. 4,266 ft.

Wilson County

A. G. Reimenschneider No. 2 L. Harrell, 750 ft. NE line, 2,800 ft. NW line, Barrera Sur. Drlg. 332 ft.

Zapata County

Ivan Howard No. 1 Martinez, 4,950 ft. SW line, 330 ft. NW line, Blk. 5, Sur. 206. T.D. 2,511 ft.; D.&A.

Oklahoma Co. No. 1 Sanchez, Sh. 9, Blk. 37, Sanchez ranch. Set sur. csg.; drlg. 163 ft.

O. J. Perren No. 1 Uribe, 330 ft. NE line, 227 ft. SE line, Blk. 31, Borrego grant. R.U.

Zavalla County

Bay Oil Co. No. 1 Calliant, sec. 43, A. B.&M. Sur. Spudded in.

W. L. Bridges No. 1 Price & Flowers, 1,320 ft. N and W lines, Blk. 1, sec. 19. Drlg. 407 ft.

Frank Buttram No. 1 Whitecotton, 2,400 ft. N line, 300 ft. W line, A.B.&M. Sur. Drlg. 3,660 ft.

Leona Oil Co. and Witherspoon Oil Co. No. 1 West, 330 ft. E line, midway N and S lines, sec. 1, Bustillo Sur. T.D. 4,380 ft.; S.D.

S. W. TEXAS PROVEN

Caesar—Bee County

Sun Oil Co. No. 2 Borrown, 810 ft. E line, 1,500 ft. N line tr., G. Baker Sur. Set csg. 3,112 ft.; W.O.C.

Dirks—Bee County

Dirks Bros. & McMurray No. 1 Harris, 200 ft. N line, 330 ft. W line, 61.9-ac. tr., Dugat Sur. Set csg. on sd.; drlg. plugs.

Illinois Pet. Co. No. 12-B Hall, Butler Sur. M.I.M.

Texas Co. No. 16 Young, 1,980 ft. NE of No. 9, T. J. Butler Sur. Drlg. 290 ft.

Pettus—Bee County

United Prod. Co. No. 53 Ray, Thos. Hanson Sur., Abst. 172. Sd. 3,934-35 ft.; W.O.C.

Ray—Bee County

N. V. Duncan No. 3-A Campbell, B.&B. Sur., Abst. 139. R.U.

Alta Verde—Brooks County

Pedernal Oil Co. No. 1 Singer, 330 ft. S line, 280 ft. W line, NW¼, SW¼, Sur. 436. R.U.

Hagist—Duval County

Marzo Oil Co. No. 3 Hagist, 660 ft. SW of No. 1, Sur. 6. Drlg. 1,420 ft.

Hoffman—Duval County

W. D. Maston No. 1 Ruiz, Sur. 128. Set sur. csg.; W.O.C.

Plymouth Oil Co. No. 2 Cuellar, 330 ft. NW and NE lines tr., Sur. 117. T.D. 2,885 ft.; flowing oil and S.W.

Standard Oil Co. of Kans. No. 2 Hoffman, 80-ac. tr., Sur. 118. Comp.; T.D. 2,874 ft.

Government Wells—Duval County

J. T. Stover No. 1 Hester, 330 ft. S and E lines, SW¼, NE¼, Sur. 47. Spudded.

Loma Novia—Duval County

Bridwell Oil Co. No. 9 B.C.C., 990 ft. S and W lines, SE¼, Sur. 76. Drlg. 2,500 ft.

Bridwell Oil Co. No. 14 B.C.C., Sur. 76. Testing sd. 2,539 ft.

Bridwell Oil Co. No. 16 B.C.C., 660 ft. N of No. 15, 120-ac. tr., Sur. 76. T.D. 2,660 ft.; comp. 18 B.P.H.

Bridwell Oil Co. No. 7-B Hubbard, 330 ft. S and W lines, N½, NE¼, Sur. 75. Testing 2,620 ft.

Bridwell Oil Co. No. 15-C Hubbard, 330 ft. S and W lines tr., Sur. 75. T.D. 2,553 ft.; comp.; 18 B.P.H.

Bridwell Oil Co. No. 16-C Hubbard, 330 ft. S and W lines, NW¼, SW¼, Sur. 75. Comp.; sd. 2,550-60 ft.

Duval Oil Co. No. 21 B.C.C., 660 ft. W of No. 17, 660 ft. S of No. 18, Sur. 59. T.D. 2,561 ft.; comp.; no gauge.

Duval Oil Corp. No. 22 B.C.C., 660 ft. W of No. 21, 660 ft. S of No. 20, Sur. 59. Set csg. 2,550 ft.; W.O.C.

Duval Oil Corp. No. 23 B.C.C., Sur. 59. M.I.M.

Highland Oil Co. No. 8 Hubbard, E½, Sur. 73. Comp.; 30 B.P.D. on pump; T. D. 2,542 ft.

Highland Oil Co. No. 10 Hubbard, W 320-ac. tr., sec. 73. Spudded in.

Humble O. & R. Co. No. 11-A Hubbard, N½, Sur. 85. Comp.; no gauge; T.D. 2,848 ft.

Humble O. & R. Co. No. 12-A Hubbard, Sur. 84. Skidding on.

Humble O. & R. Co. No. 37-B Hubbard, E½, Sur. 72. T.D. 2,714 ft.; comp. 198 B.P.D.

Humble O. & R. Co. No. 61-B Hubbard, W½, Sur. 83. Drlg. 1,925 ft.

Humble O. & R. Co. No. 44-C Hubbard, E½, Sur. 72. Sd. 2,660-79 ft.; cg. deeper.

Humble O. & R. Co. No. 11 Vela, N½, Sur. 42. T.D. 2,776 ft.; swbg.

Magnolia Pet. Co. No. 28 Hahl, Sur. 67. Sd. 2,596-2,612 ft.; comp.; 20 B.P.H. on ½-in. choke; T.D. 2,631 ft.

Magnolia Pet. Co. No. 29 Hahl, Sur. 67. T.D. 2,659 ft.; rng. tbg.

Magnolia Pet. Co. No. 31 Hahl, Sur. 67. Drlg. 2,420 ft.

Reynosa Oil Co. No. 3-A Davidson, NE¼, Sur. 114. R.U.

Reynosa Oil Co. No. 2 Hubbard, S½, SW¼, Sur. 75. T.D. 2,558 ft.; comp. 8 B.P.H.

Rosan Oil Co. and Texla No. 11 Hubbard, Sur. 84. Drlg. 2,684 ft.

Rosan Texla Oil Co. No. 13 Hubbard, 310 ft. W line, 330 ft. N line, S½, Sur. 84. Sd. 2,816-31 ft.; comp.; 27 B.P.H.

Shell Pet. Corp. No. 4 Mendoza, 2,442 ft. S line, 330 ft. W line, Sur. 68. T.D. 2,753 ft.; comp.; 20 B.P.H.

Shell Pet. Corp. No. 5 Mendoza, Sur. 68. T.D. 2,713 ft.; rng. Schlumberger.

Sun Oil Co. No. 3 Hubbard, Sur. 84. T.D. 2,816 ft.; comp.; 6 B.P.H. on pump, 25% wtr.

Sun Oil Co. No. 4 Hubbard, 990 ft. N line, 330 ft. W line, 336-ac. tr., sec. 83. Loc.

Texas Co. No. 13 B.C.C., Sur. 59. Drlg. 2,423 ft.

Texas Co. No. 35 Wendt, Sur. 68. Drlg. 2,593 ft.

Texas Co. No. 30 Wendt, Sur. 68. Comp.; 70 B.P.D.; sd. 2,688-2,712 ft.

Texas Co. No. 34 Wendt, Sur. 68. Rng. lnr. 2,689 ft.

Valley Osage Oil Co. No. 3 Hubbard, Sur. 75. Comp. 10 B.P.H.; T.D. 2,627 ft.

Valley Osage Oil Co. No. 4 Hubbard, Sur. 75. R.U.

Loma Vista—Duval County

Shell Pet. Corp No. 1-A Welder, 330 ft. N line, 900 ft. W line lse., Sur. 103. M.I.M.

Piedra Lumbre—Duval County

Humble O. & R. Co. No. 1-B D.C.R.C., 330 ft. N and W lines, N½, NE¼, Sur. 95. Set csg. 1,970 ft.; drlg. in.

Magnolia Pet. Co. No. 2 D.C.R.C., NW¼, Sur. 95. Comp.; 9 B.P.H. on ⅝-in. choke; T.D. 1,949 ft.

Texas Co. No. 16 D.C.R.C., SW¼, Sur. 100. T.D. 1,976 ft.; testing.

Seven Sisters—Duval County

Atlantic Oil Prod. Co. No. 7-C Welder, 990 ft. N and W lines, Sur. 591. T.D. 2,507 ft.; comp.; 12 B.P.H.

Atlantic Oil Prod. Co. No. 5-D Welder, 330 ft. S and E lines, Sur. 113. T.D. 2,491 ft.; comp.; 15 B.P.H.

Atlantic Oil Prod. Co. No. 9-D Welder, 2,970 ft. E line, 330 ft. N line, Sur. 113. T.D. 2,477 ft.; testing.

Atlantic Oil Prod. Co. No. 10-D Welder, Sur. 113. Drlg. 557 ft.

Buchanan & Blanco Oil Co. No. 1-B Welder, 330 ft. N and W lines, Sur. 591. Sd. 2,486-97 ft.; comp. 13 B.P.H.

Buchanan & Blanco Oil Co. No. 2-B Welder, 330 ft. S and W lines, S½, NW¼, Sur. 591. Sd. 2,494-2,503 ft.; swbg.

Buchanan & Blanco Oil Co. No. 3-B Welder, 990 ft. W line, 330 ft. N line, S½, NW¼, Sur. 591. Set sur. csg.; W.O.C.

S. B. Cloyes No. 1 Serna, 330 ft. N and E lines tr., Sur. 384. Loc.

Diamond Half Oil Co. No. 4 Serna, Sur. 384. Sd. 2,404-16 ft.; W.O.C.

Dulce Oil Co. No. 2-B Serna, Sur. 384. Skidding on.

Farr Oil Co. No. 3 Welder, Sur. 383. Drlg. 2,257 ft.

Humble O. & R. Co. No. 2 Badgley, Sur. 397. T.D. 2,537 ft.; comp. 125 B.P.D.

Humble O. & R. Co. No. 11-A Serna, Sur. 384. T.D. 2,475 ft.; rng. lnr. and screen.

Humble O. & R. Co. No. 7-B Serna, SE¼, Sur. 384. Drlg. 2,025 ft.

Humble O. & R. Co. No. 14-B Serna, SE¼, Sur. 384. Sd. 2,191-99 ft.; tested mud; T.D. 2,250 ft.; D.&A.

Humble O. & R. Co. No. 9 Smith, Sur. 382, T.D. 2,445 ft.; rng. lnr. and screen.

Humble O. & R. Co. No. 3 Wright, 330 ft. S and W lines, SW¼, Sur. 118. Cg. 2,475 ft.

Navarro Oil Co. No. 1 Welder, 330 ft. E line, 2,970 ft. N line, Sur. 383. T.D. 2,461 ft.; comp.; 16 B.P.H. on ¼-in. choke.

Navarro Oil Co. No. 2 Welder, 330 ft. S and E lines tr., Sur. 383. Sd. 2,440-62 ft.; set csg.: W.O.C.

Parr Oil Co. No. 2 Welder, 990 ft. W line, 330 ft. N line, 80-ac. tr., Sur. 383. Sd. 2,432-46 ft.; comp. 4 B.P.H. on ½-in. choke.

Reliance & Kleiner No. 5 Welder, 1,648 ft. N line, 1,622 ft. E line, Sur. 381. Drlg. sd. 2,409-22 ft.; W.O.C.

Reliance Oil & Roy. Co. and Henderson & Harvey No. 1 Drummond, 330 ft. S and E lines, Sur. 308. R.U.

Reliance Oil & Royalty Co. No. 2-A Telford, Sur. 386. Drlg. 2,466 ft.

Santa Clara Oil Co. (Atkins & O'Neil) No. 31 Welder, NE 160-ac. tr., Sur. 383. Sd. 2,441-63 ft.; set csg. 2,452 ft.; W.O.C.

Santa Clara Oil Co. (Atkins & O'Neil) No. 2-B Welder, Sur. 383. R.U.

Santa Clara Oil Co. No. 5-B Welder, SE cor. tr., Sur. 383. D S.T. 1,400 ft. oil; 8 min.; comp.: no gauge.

Santa Clara Oil Co. (Atkins & O'Neil) No. 7-B Welder, Sur. 383. Spudded in.

Santa Clara Oil Co. and H. H. Henderson No. 2-C Welder, Sur. 381. Sd. 2,410-28 ft.; comp. 12 B.P.H.

Santa Clara Oil Co. (Atkins & O'Neil) No. 3-C Welder, Sur. 381. Sd. 2,423-37 ft.; set csg.: W.O.C.

Shell Pet. Corp. No. 6-A Welder, W½, SW¼, Sur. 385. Comp. 17.34 B.P.H.

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Westheimer & Daube No. 3 Campos, Sur. 224. T.D. 2,325 ft.; comp. 8 B.P.H.

Pearsall—Frio County

Amerada Pet. Corp. No. 1 Correy & McWilliams, 660 ft. N line, 721 ft. W line, Tr. 17, Manuel Tijerina Sur. No. 300. T.D. 5,676 ft.; cleaned hole: prep. shoot.

Amerada Pet. Corp. No. 1 Correy & McWilliams, 660 ft. S line, 728 ft. E line, Tr. 6, Jose Arocha Sur. 298. Cg. 5,526 ft.

Amerada Pet. Corp. No. 7 Haiff & Oppenheimer, 1,320 ft. W line, 330 ft. S line, J. H. Gibson Sur. No. 16. Stdg. 3,926 ft.

Amerada Pet. Corp. No. 1 Kothman, 500 ft. N and W lines, B. L. Crouch Sur. No. 90/6. T.D. 5,407 ft.; comp.; 70 B. P.D. on ¾-in. choke; cleaning.

Amerada Pet. Corp. No. 2 Smith, 466 ft. E line, 2,771 ft. N line tr., J. V. Mason Sur. Drlg. 37 ft.

Combs & Oakes No. 1 Arp, 320 ft. S and E lines, 102-ac. tr., S. Blair Sur. 297. R.U.

Gillette—Goliad County

Jane Oil Co. No. 3 Gillette, 990 ft. NW line, 795 ft. SW line, J. Gomez Sur. Comp. 206 B.P.D.; sd. 3,679-87 ft.

North Petlus—Goliad County

Jane Oil Co. No. 2 Welden & Lackey, J. Gomez Sur. Sd. 3,633-92 ft.; comp.: gasser.

Magnolia Pet. Co. No. 6 Scarborough, 600 ft. S of No. 4, Talley Sur. T.D. 3,616 ft.; flowing; no gauge; C.P. 300 lbs.; T.P. 155 lbs.

Clark—Guadalupe County

Eickenroht & Gallagher No. 1 Johns, 130 ft. E line, 450 ft. N line, 840-ac. tr., DeWitt Sur. 13. Cg. 2,580 ft.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No. 1 Farm, Tr. 2,309, Blk. 59. Swbg. 7,540-49 ft.; S.G.

Union Sulphur Co. No. 8 American Rio Grande L. & I. Co., 660 ft. N & E lines, Tr. 2,129, Blk. 57. Cg. 7,502 ft.

Union Sulphur Co. No. 9 American Rio Grande L. & I. Co., Farm Tr. 2,276, Blk. 59. Drlg. hd. sdy. sh. 5,212 ft.

Samfordyce—Hidalgo County

J. H. Anderson No. 4 Guerra, Tr. 254, Porc. 40. Sd. 2,742-56 ft.; set csg.: W. O.C.

J. T. Barlow No. 1 Maria Flores de Chapa, 330 ft. W line, 692 ft. S line, Tr. 250, Porc. 29. Sd. 2,951.5-55 ft.; sprayed oil through 1/16-in. choke; T.P. 1,200 lbs.; shut in: W.O. orders.

Dean Bros. No. 1 Lula George, 150 ft. S line, 230 ft. W line, 10-ac. tract, Tract 13, Porc. 40. Sd. 2,748-52 ft.; W.O.C.

Henshaw Bros. No. 1 Seabury, Tr. 254, Porc. 58. Sd. 2,759-71 ft.; W.O. perf.

Henshaw-Davis-Lacey No. 1 Farias hrs., Tr. 255, Porc. 39. Sd. 2,769-85 ft.; comp. 43 B.P.D. on 3/32-in. choke.

Weekly Oil Corp. No. 1 George, Tr. 13, Porc. 41. M.I.M.

Weekly Oil Co. No. 2-B Guerra, Tr. 12, Porc. 41. Perf. 2,775-85 ft.; comp.

Sandia—Jim Wells County

J. E. Walsh No. 2 Wade, Lot 2, Blk. "C," Bode Subd. Drlg. 1,097 ft.

San Diego—Jim Wells County

Houston Oil Co. No. 1 Hawkins & Wallace, 990 ft. S and E lines, Blk. 11. Cg. in sdtkd. hole 6,252 ft.

Cailliham—McMullen County

Sweeringen et al No. 1 Cailliham, 150 ft. N line, 275 ft. E line, Blk. 17, M. Holy Sur. S.D. 1,670 ft.

Lucas—Live Oak County

Houston Oil Co. No. 34 Cartwright, L-933 ft. N of No. 33. T.D. 500 ft.; blew out.

King—Nueces County

La Jita Oil Corp. No. 2 King, 660 ft. N and W lines, sec. 24. Set csg.; W.O.C.; T.D. 5,197 ft.

Saxet Heights—Nueces County

Bartlett & Reed No. 1 Carson, SW cor., 20-ac. tr., Villareal Sur. Set csg. 4,126 ft.; W.O.C.

Capitol Oils, Inc., No. 1 L. Ayres, cen. 5-ac. tr., Villareal Sur. Sd. 4,069-89 ft.; testing.

Circle Oil Co. No. 3 Whelan, 42.4-ac. tr., Villareal Sur. Comp. 12 B.P.H. on 2/16-in. choke.

Conroe Drlg. Co. No. 2 John Dunn, Villareal Sur. T.D. 4,064 ft.; comp. 200 B.P. D. on ¼-in. choke.

Conroe Drlg. Co. No. 3 McBride, NE cor. 59-ac. tr. T.D. 4,112 ft.; comp. gasser.

Conroe Drlg. Co. No. 3 McBride, 660 ft. W of No. 2. Drlg. 2,210 ft.

J. K. Culton No. 5 Baldwin, Blk. 20, Russell Farm Lots. Skidding on.

J. K. Culton No. 5 Whelan, 69-ac. tr. Perf. 4,088-91 ft.; comp.; no gauge.

Erin Oil Co. and Lee Bros. No. 1 Nut Club, 1.5-ac. tr., Lots 1, 2, 3, Blk. 1, Ellendale Gardens 2 and 3. T.D. 4,090 ft.; recomp.

Erin Oil Co. No. 1 Spiller, con. 1.5-ac. tr., Ellendale Gardens No. 3. Set csg. 4,073 ft.; W.O.C.

Tom Graham No. 1 City of Corpus Christi, C 5-ac. tr., Villareal Sur. Set sur. csg.; W.O.C. 500 ft.

Tom Graham No. 1 Kaiser, Villareal Sur. Drlg. 2,527 ft.

Graham & Roberts No. 1 Curry, Villareal Sur. Cg. 4,077 ft.

J. T. Graham No. 1 Phillips, 300 ft. W line, 104 ft. N line tr. Sd. 4,072-79 ft.; comp. 90 B.P.D. on 5/32-in. choke.

D. H. Hawn No. 2 Skipper, Villareal Sur. Set csg. on sd. 4,070-80 ft.; W.O.C.

Johnson et al No. 1 Cowles, 180 ft. W line, 75 ft. S line tr. T.D. 3,500 ft.; fsg.

Ray Johnson No. 1 Smith, 3-ac. tr., Bancroft farm lots. Comp. 500 B.P.D.; ¼-in. choke; sd. 4,062-70 ft.

Johnston et al No. 1 Werner, Blks. 11, 12, Ellendale Gardens No. 1. Drlg. 2,-793 ft.

Port O. & G. Co. No. 1 Country Club, C Lot 20, Villareal Sur. Drlg. 1,770 ft.

Port O. & G. Co. No. 1 Sherman, 150 ft. N and W lines, Blk. 20. Drlg. 1,770 ft.

W. A. Richardson No. 2 Edwards, 10-ac. tr., Villareal Sur. Drk.

Richardson Pet. Co. No. 1 Poth, C 4-ac. tr., Villareal Sur. Top sd. 4,026 ft.; slight odor; cg. 4,056 ft.

Hiram Reed No. 1 Quinn, Villareal Sur. M.I.M.

Republic Nat. Gas Co. No. 4-B Baldwin, 790 ft. SE of No. 2, 330 ft. NE line, Blk. 19. T.D. 4,085 ft.; perf. for comp.

J. B. Salmon No. 1 Clark, Blk. 4, Oaklawn Subd. Spudded in.

Southern Minerals Corp. No. 2 Alkali, 660 ft. N of No. 1, midway E and W lines of tr. T.D. 4,035 ft.; cleaning in pits.

W. F. Stone No. 2 Schleicher. Perf. 4,080-85 ft.; comp.

W. F. Stone No. 1-B Schliecher, Blk. 13, Ellendale Gardens No. 2. Set sur. csg.; W.O.C.

Taylor Ref. Co. No. 1 Corpus Christi Golf and Country Club, 83-ac. tr., Villareal Sur. Drlg. 3,447 ft.

Taylor Ref. Co. No. 1 Kaler, Villareal Sur. Comp. 226 B.P.D.; sd. 4,065-78 ft.

R. Y. Walker No. 1 Clark, Villareal Sur. Sd. 4,061-65 ft.; comp. 9 B.P.H. on ¼-in. choke.

Westgate Oil Co. No. 3 Sturm Est., 89-ac. tr., Villareal Sur. Rmg. to set csg. 4,-082 ft.

Westgate Oil Co. No. 6 Sturm Est., Villareal Sur. Skidding on.

Saxet—Nueces County

Conroe Drlg. Co. No. 1 Frank Bliss, W 80-ac. tr., J. W. Stevens Sur. No. 406. R.U.

Tom Graham No. 2 Flato, Blk. 30. Perf. 4,473-83 ft.

W. B. Hinton No. 1 E. B. Cole, 60-ac. tr., Villareal Sur. Spudded in.

A. P. Holliday No. 2 Griffith, 347 ft. W of No. 1. G. Frank Sur. 416. R.U.

Houston Oil Co. No. 3 Harrell, Blk. 19, Farm Lots No. 576. Set sur. csg.; W. O.C.

Morgan Gulf Oil Co. and Great States No. 1-B Rand Morgan, B.S.&F. Sur. 404. R.U.

Renwar Oil Co. and Maryland Corp. No. 1 Manatt, cen. Blk. 5, Clarkwood townsite. Sd. 4,409-24 ft.; set csg. W.O.C.

Renwar Oil Co. No. 1 Morgan, sec. 315. T.D. 1,000 ft.; S.D.

W. A. Richardson No. 2 Isensee, C Blk. 7, Clarkwood townsite. Sd. 4,423-40 ft.; comp. 900 B.P.D. on 5/16-in. choke.

W. A. Richardson No. 1 Smith, C Blk. 4 Clarkewood townsite. Spudded in.

Southern Minerals Corp. No. 4 Isensee, SE cor. 225-ac. tr., C. Land Sur. 404. Set csg. 901 ft.; W.O.C.

Southern Minerals Corp. No. 1 Mastin, G. Frank Sur. 416. Drlg. 3,230 ft.

Southern Minerals Corp. No. 4 Smith, Blk. 14. Drlg. sh. 1,592 ft.

Southern Minerals Corp. No. 5-A Isensee, sec. 404. Comp.; no gauge: sd. 4,389-4,405 ft.

Texon Royalty Co. No. 1 Lingnau, 12.44-ac. tr., C. Land Sur. 404. Drlg. 3,721 ft.

Texon Royalty Co. No. 1 McElroy, 115 ft. N line, 105 ft. W line, 40-ac. tr., Gallagher Sur. Set sur. csg.; W.O.C.

Plymouth—San Patricio County

Humble O. & R. Co. No. 1 Bevly, 466 ft. N and W lines tr., Blk. 8, sec. 35, Taft Subd. Drlg. sh. 4,491 ft.

Magnolia Pet. Co. No. 7 Corpus Christi Bank, 932 ft. E of No. 6, sec. 24, R.U.

Plymouth Oil Co. No. 42-C Welder, 2,932 ft. N line, 2,942 ft. E line, sec. 49. T.D. 5,642 ft.; comp.; no gauge.

Plymouth Oil Co. No. 43-C Welder, 2,046 ft. S line, 2,355 ft. W line, sec. 49. Cg. 5,525 ft.

Plymouth Oil Co. No. 44-C Welder, 5,256 ft. S line, 1,312 ft. E line, sec. 71. Drlg. 2,617 ft.

Plymouth Oil Co. No. 45-C Welder, 1,128 ft. S line, 2,522 ft. W line, sec. 49. Drlg. 624 ft.

Plymouth Oil Co. No. 46-C Welder, 659 ft. S line, 1,507 ft. S line, sec. 49. Set sur. csg. 338 ft.; W.O.C.

Sun Oil Co. No. 4 Hunt, 466 ft. S and W lines, 154.39-ac. tr, T.D. 5,645 ft.; rng. tbg.

Taft Field—San Patricio County

Humble O. & R. Co. No. 1 Godwin, 330 ft. S and W lines, sec. 23, Taft, Farm Lands, Third Addn. T.D. 4,100 ft.; sd. 4,005 ft.; swbd. dry; to perf.

Humble O. & R. Co. No. 2 Mayo, 1,323 ft. S line, 1,152 ft. E line tr., Tabor Sur. Drk.

Shell Pet. Corp. No. 1 Pullin, Blk. 4, sec. 1. Recmtg. 4,916 ft.

Margo—Starr County

H. L. Curry No. 1 Garcia, 30-ac. tr., Sh. 7-B, Porc. 70, J. of Mier. Drlg. 627 ft.

St. Marys O. & G. Co. No. 1 O'Shea, 450 ft. N line, 935 ft. W line, Sh. 65, Porc. 71. Top sd. 387 ft.; W.O.C.

Rio Grande City—Starr County

Foch Oil Co. No. 8 Doyno, .495 ft. N line, 528 ft. W line, Blk. 4, Sh. 77-A, Porc. 81. Sd. 1,440-46 ft.; stdg.: oil in hole: W.O. pump.

Samfordyce—Starr County

E. A. Graham No. 1 Santos Villareal, 26.48-ac. tr., Tr. 250, Porc. 38. Set sur. csg. 208 ft.; W.O.C.

Phillips and Barnsdall Oil Co. No. 9 Yturria L. & L. Co., 709 ft. W line, 1,-710 ft. S line tr., E½, Porc. 100. Sd. 2,790-96 ft.; W.O.C.

Porter & Grimes No. 2 Garcia Land & Livestock Co., Lot 1, W½, Porc. 100. M.I.M.

Porter & Pickens No. 3-B Garcia Land & Cattle Co., W½, Porc. 100. D.S.T. 240 ft.; P.L.O. 10 min.; sd. 2,791-96 ft.; comp.: jetting; no gauge.

Skelly Oil Co. No. 12 Seabury, 10-ac. tr., Tr. 256, Porc. 38. R.U.

Sun Oil Co. No. 2 Chapatola, Porc. 99. Drlg. 27 ft.

Aviator—Webb County

Five Spot Drlg. Co. No. 1 Bruni, Blk. 44, Albercas grant. Drlg. 1,217 ft.

Cole—Webb County

Cole Pet. Co. No. 97 Benavides, Blk. 3, sec. 7. Drlg. 2,092 ft.

Lopez—Webb County

Hunter Co. No. 7 Billings, 2,310 ft. N and E lines, Sur. 113. Drlg. 1,739 ft.

Hunter Co. No. 8 Billings, 1,650 ft. N line, 2,310 ft. E line, Sur. 113. Comp. 20,000,000 ft. gas; sd. 2,165-89 ft.

C. H. Lewis No. 6 Lopez, sec. 110. M.I.M.

Luling O. & G. Co. No. 1 Peal, 230 ft. S and E lines, Blk. 11, Sur. 72. Sd. 2,-077-90 ft.; comp. 20,000,000 ft. gas; R.P. 700 lbs.

Mills Bennett Prod. Co. No. 9 A. S. Billings, 975 ft. N line, 330 ft. E line, sec. 113. Set csg. 2,159 ft.; W.O.C.

Mills Bennett Prod. Co. No. 5 Garcia, Sur. 113. T.D. 2,194 ft.; comp. 24 B.P.H.

Mills Bennett Prod. Co. No. 3 Montemayor, 2,310 ft. W line, 2,042 ft. N line, Sur. 114. Drlg. 1,832 ft.

Mills Bennett Prod. Co. No. 7 Montemayor, 1,429 ft. N line, 330 ft. W line, Sur. 114. Sd. 2,152-62 ft.; comp. 21 B. P.H.

Mills Bennett Prod. Co. No. 2 Valdez, Sh. 9-C, sec. 111. Comp. 20 B.P.H.; T.D. 2,228 ft.

Mortimer & Springer No. 4 Paula Vela, Sur. 114. Top sd. 2,195 ft.; cg. 2,195 ft.

Mortimer & Springer No. 10 Maria Lopez, Sur. 112, 660 ft. N of No. 9. Sd. 2,221-28 ft.; comp.

Superior Oil Co. No. 5 A. S. Billings, Sur. 113. Sd. 2,179-90 ft.; comp. 15 B.P.H.

Superior Oil Co. No. 6-A Billings, Sur. 113. Sd. 2,183-98 ft.; drlg. plugs.

O'Hern—Webb County

Jameson & Byron No. 1 S. Benavides, Sur. 173. T.D. 3,014 ft.; D.&A.

Magnolia Pet. Co. No. 5 J. Benavides, Blk. 360. T.D. 2,862 ft.; swbg.

Magnolia Pet. Co. No. 11 Seacord-Benavides, Blk. 359, Rng. tbg. 2,856 ft.

Otis Phillips No. 1 Benavides, Blk. 250. Sd. 2,825-41 ft.; comp. 22 B.P.H.; T.D. 2,281 ft.

T. S. Reed No. 2 Brennan-Benavides, Blk. 318. Cg. 2,725 ft.

Texas Co. No. 15 Benavides, Blk. 424. T.D. 2,635 ft.; comp. 250 B.P.D.

Texia Oil Corp. No. 1 Benavides, Blk. 361. Drlg. 343 ft.

Escobas—Zapata County

B. W. Roscoe No. 4 Bustamante, Share 33. Drlg. 629 ft.

S.R.C. Oil Co. No. 16-A Trevino, 330 ft. S line, on line between Blks. 14 and 15, Sur. 66. Drlg. plugs 1,280 ft.

Texas Co. No. 83 Whitehead, Cerrito Blanco grant. Drlg. 597 ft.

Haynes—Zapata County

Clover O. & G. Co. No 12 Haynes, Blk. 7. Cg. 807 ft.

WEST TEXAS WILDCATS

Andrews County

Grisham-Hunter Oil Corp. No. 1 Ratliff & Bedford, 1,320 ft. N and W, sec. 24, Blk. 73, P.S.L. Location.

Humble O. & R. Co. No. 1 J. M. Spinks, sec. 12, Blk. A-20. T.D. 4,550 ft., shot 420 qts. To acidize, flowed 197 bbls. in 24 hrs.

Brewster County

P. C. Dodson No. 1 Texas American Synd sec. 66, Blk. 10, G.H.&S.A. Sur. Drlg. 1,500 ft.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 E. B. Duggan, cen. Labour 13, League 55, Oldham County School Land. Spudded. To shoot.

Concho County

Maverick Oil Co. No. 1 Jim Rice, sec. 18, I.N.R.R. Sur. T.D. 3,454 ft.; P.B. W. C. Nelson et al No. 1 Rice, 1,980 ft. S and 660 ft. W, sec. 13, H.&T.C. Sur. Fsg. 200 ft.

Crane County

Clark et al No. 1 A. P. Jordan, sec. 12, Blk. B-22, P.S.L. Sur. Machine.

Gulf Oil Corp. No. 2 W. N. Waddell, 1,-980 ft. from S and W, sec. 16, Blk. B-31. Drlg. 309 ft.

Gulf O. Corp. No. 2 Tubbs, 440 ft. N and E, sec. 12, Blk. 27-B, R.U. Standard tools.

Humble O. & R. Co. No. 2 Tubbs, sec. 11, Blk. B-27. Drlg. 2,127 ft.

Loffland Bros. No. 2 Tubbs, 2,200 ft. N and 440 ft. E, sec. 9, B-27, Derrick.

Moore Bros. No. 1 Barnsley, sec. 43, Blk. 32, P.S.L. Sur. Drlg. 3,515 ft.

Rider et al No. 1 Thaxton, 200 ft. from NE and 2,570 ft. from SE, sec. 2, W. L. Wilkenson Sur. Spudded and S.D.

Sinclair Prairie Oil Co. et al No. 1 Tubbs, sec. 3, Blk. B-27. Drlg. 3,834 ft.

L. R. Stroud No. 1 Moseley. Drlg. 1,362 ft.

Crockett County

John I. Moore No. 1 A. C. Hoover, sec. 4, Blk. FF, B.&B. Sur. T.D. 650 ft. U.R. csg.

Ector County

W. Dunning, Jr., No. 1 H. E. Cummins, sec. 33, Blk. 45, Twp. 1n, T.&P. Sur. Drlg. 3,527 ft.

Grisham-Hunter Corp. No. 1 R. B. Cowden, 1,980 ft. S and 660 ft W, sec 10, Blk. 45, Twp. 2n, T.&P. Sur. Loc.

Edwards County

Paul Teas No. 1 J. B. Stewart, sec. 1, Blk. DA, G.C.&S.F. Sur. Drlg. 5,214 ft.

Fisher County

Forest Dev. Co. No. 1 A. M. Dry, sec. 108, Blk. 2, H.&T.C. Sur. Drlg. 2,446 ft.

Gaines County

Landreth Prod. Co. No. 1 Kirk, sec. 21, A-21. S.D. 2,377 ft.

Glasscock County

Fleetborn Oil Corp. No. 1 F. C. Dodson, sec. 13, Blk 34, Twp. 3s. Drlg. 3,138 ft.

Bruce Frazier No. 1 E. Patterson, 330 ft. N and E, sec. 185, Blk. 29, W. & N.W. S.D. 25 ft. to R.U.

Howard County

Southern Oil Co. No. 1 W.P. Edwards, sec. 32, Blk. 30, Twp. 1s, T.&P. Sur. Drlg. 1,647 ft.

D. C. Reed et al No. 1 Walter Pike, 660 ft. from S and E, sec. 24, Blk. 33, Twp. 1n, T.&P. Sur. Drlg. 55 ft.

Hudspeth County

Haymon Krupp Oil & Land Co. No. 1 Thaxton, sec. 34, Blk. 74, Twp. 6, T.&P. Sur. T.D. 893 ft. Straightening hole.

Jeff Davis County

C. M. Joiner No. 1 Jones & Coffield, sec. 1, Blk. 3, H.&T.C. Sur. S.D. 3,420 ft.

Jones County

Fain-McGaha Oil Corp. No. 1 Hayden, E. C. Martinez Sur. 195. T.D. 2,107 ft. C.O.

T. D. Humphrey No. 1 J. M. Radford, 1-sec. 19, Blk. 16, T.&P. Sur. Drlg. 1,010 ft.

Parker No. 1 C. L. Brown, sec. [illegible] Blk. 2, T.&N.O. Sur. T.D. 1,637 ft. C.O.

Martin County

Woodley Pet. Co. No. 1 M. S. King, sec. 30, Blk. 35, Twp. 3s, T.&P. Sur. Drlg. 3,272 ft.

Menard County

Wilcox O. & G. Co. No. 1 Merchenson, sec. 158, E.L.R.R. Sur., Abst. 1,340, 8 miles S of Menard. Drlg. 1,960 ft.

Pecos County

S. Thompson No. 1 Elsinore Cattle Co., sec. 53, Blk. D, G.C.&S.F. Drlg. 172 ft.

Trans-Pecos Oil Co. No. 1 F. W. Popham, sec. 235, Blk. 11, G.H.&S.F. Sur. S.D. 365 ft.

Trans-Pecos Oil Co. No. 1 Gallaher, sec. 9, Blk. 51, T.&P. Sur. Spud and S.D.

Presidio County

Linderman Bros. Oil Corp. No. 1 J. B. Bledsoe & Badgley, sec. 15, Blk. 351, G.C.&S.F. R.R. Co. Sur., 2½ mil. NE of Presidio. T.D. 1,635 ft.; trying to loosen pipe.

Reagan County

Bahan & Rhodes No. 1 M. Chase, 1,320 ft. from N and E, sec. 40, Blk. 36, Twp. 5s, T.&P. Sur. R.U. Spudder.

Schleicher County

Cardinal Oil Co. et al No. 1 J. A. Whitten, sec. 35, Blk. LL, T.C.R.R. Sur. U.R. at 1,370 ft.; drlg. 3,400 ft.

Magnus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, Blk. V-28. Elev. 2,209 ft.; S.G. 4,350 ft.; drlg. 5,280 ft.; gas sd. 4,956-58 ft.

Scurry County

Bristow & Cantrill No. 1 Shannon, Est., sec. 331, Blk. 97, H.&T.C. Sur. Drlg. 3,369 ft.

Tom Green County

Spinner No. 1 Reed, Sub. 39, Mason & Perry Sur. Drlg. 1,930 ft.

Ward County

Abell Brothers' No. 1 Lancaster Estate, sec. 61, Blk. 8, H.&G.N. Sur. in Pecos County, 5½ miles down Pecos River from NW cor. of Pecos and E. cor. of Reeves County. T.D. 2,425 ft. Shot. Fsg. tools.

Gulf Oil Corp. No. 1 W. A. Estes, 330 ft. from NE and SE, sec. 38, Blk. 34, H.& T.C. Sur. R.U. standard tools.

Lindsay & Bolin No. 1 Thomas, sec. 21, Blk. 34, H.&T.C. Sur. S.D. 2,520 ft.

Olsen & Anderson No. 1 Yell, W. F. Stewart Sur., sec. 6, T.D. 2,600 ft.; P.B. to 2,455 ft.; standardizing.

Richardson Oils, Inc., No. 1 Hathaway, sec. 37, Blk. 34, H.&T.C. Sur. Drlg. 634 ft.

Superior Oil Co. No. 1 J. H. Hughes, sec. 67, Blk. 34, H.&T.C. Sur. T.D. 1,995 ft.; U.R. csg.

Winkler County

Bert Fields et al No. 1 Pure-Clapp, 330 ft. N and E, sec. 26, Blk. 26. Drlg. 2,462 ft.

Illinois Oil Co. No. 1 McCutchen, sec. 16, Blk. B-3. Cellar.

R. H. Henderson et al No. 1 J. B. Walton, sec. 10, Blk. 26. T.D. 3,045 ft.; C.O.

R. H. Henderson No. 2-B Walton, 330 ft. from N and W, sec. 10, Blk. 26. T.D. 2,650 ft. Set csg.

Herbert Oil Co. No. 1 I. Hendrick, 2,310 ft. from S and W, sec. 14, Blk. 26. T.D. 2,940 ft.; standardizing.

Humble O. & R. Co. No. 3-C Walton, sec. 34, Blk. 74, P.S.L. Sur. Drlg. 626 ft.

Illinois Oil Co. No. 1 Central State Bank of Abilene, sec. 23, Blk. 26, P.S.L. Sur. Drlg. 3,033 ft.

Magnolia Pet. Co. No. 1 State-Walton, sec 7, Blk. B-3. T.D. 3,695 ft.; P.B. 3,450 ft.; to reacidize.

Fred Hyer No. 1 Evans, sec. 8, Blk. 56. Drlg. 3,966 ft.

Joiner No. 1 Evans, sec. 46, Blk. 73, P.S.L. Sur. Fsg. 3,125 ft.

Read & Duffey No. 1 Sealey, 330 ft. from N and W, sec. 8, Blk. A, G.M.M.B.&A. Sur. Loc.

Superior O. & G. Co. of Tulsa No. 1 M. J. Hill, sec. 18, Blk. B-11, P.S.L. Sur. Drlg. 2,744 ft.

Wahlenmaier and Atlantic Oil Prod. Co No. 1-A Walton, sec. 34, Blk. 74. T.D. 2,583 ft.; R.U. rotary.

Yoakum County

Stogner et al No. 1 Roosevelt, 2,230 ft. from N and 330 ft. from E, sec. 215, Blk. D, John H. Gibson Sur. T.D. 140 ft. R.U. rotary.

TEX. PANHANDLE WILDCATS

Gray County

Bell Oil & Gas Co. No. 2 Furneaux, 330 ft. from S and E lines of NW¼ of sec. 102, Blk. B-2, H.&G.N. Sur. M.I.M.

Joana Oil Corp. No. 1 Rendleman, sec. 146, Blk. B-2, H.&G.N. Sur. Drlg. 2,200 ft. in shale.

K. Kinsey No. 1 Stephens, sec. 127, Blk. sec. 546, Blk. H, B-2, H.&G.N. Sur. T.D. 2,475 feet, fishing tools.

Salisbury Oil Co. No. 1 Husted, C W¼ sec. 116, Blk. B-2, H.&G.N. Sur. Fishing 2,733 ft.

Hartley County

O. V. Beck et al No. 1-A Matador Ranch, sec. 20, Blk. 22, C.S.S. Sur. Pipe stuck 4,600 ft. and S.D.

Hutchinson County

Phillips Pet. Co. No. 1 Bryan, sec. 6, Blk M-21, T.C. Ry. Sur. T.D. 3,061 ft., pay 2,990-3,060 ft., shot 620 qts. 2,985-3,061 ft.

Power Pet. Co. No. 1 Hodges, sec. 16, Blk. M-35, T.C. Sur. Top pay 3,050 ft.; shot; swabbed 120 bbls. oil and 20 bbls. water in 12 hrs.

L. L. Travis et al No. 1 Hodges, sec. 14, Blk. X-02, H.O.&B. Sur. 3,082 ft. T.D., shot 250 qts. 3,017-82 ft., cleaning out.

Moore County

Shamrock O. & G. Co. No. 1 Ryan-Jones sec. 190, Blk. 3-T, T.&N.O. Sur. 3,331 ft.; tested 112,500,000 ft. gas, deepening at 3,404 ft.

Wheeler County

Allender & Heare No. 1 Harvey, sec. 67, Blk. 13, H.&G.N. Sur. T.D. 3,187 ft.; fsg.

Ben G. Barnett No. 1 Stewart, sec. 73, Blk. 13, H.&G.N. Sur. S.D. 2,136 ft.

Dumar O. & G. Co. No. 1 Slavik, sec. 108, Blk. 23, H.&G.N. Sur. Drlg. 1,950 ft.

Johnston et al No. 1 Rabo, sec. 105, Blk. 23, H.&G.N. Sur. Spudded and S.D.

Phillips Pet. Co. No. 1 Porter, sec. 35, Blk. A-8, H.&G.N. Sur. T.D. 3,235 ft., underreaming 10-in. csg. 1,500 ft., water in hole.

Smith Bros. No. 1 Woodward, sec. 23, Blk. 24, H.&G.N. Sur. S.D. 3,240 ft.

E. C. TEXAS WILDCATS

Anderson County

Gulf Oil Corp No. 1 Ross, 1,770 ft. from SW and 1,370 ft. from NW of Robt. Irwin Sur. T.D. 5,476 ft.; elev. 487 ft.

Angelina County

G. F. Ginter No. 1 Martin Wagon Works, 150 ft. from N and 200 ft. from E, E. Evans Sur., 2 mi. W of Homer. R.U.

Dr. W. H. Wilson No. 1 Foster, 300 ft. from S and W of J. L. A. Berry Sur., 3½ mi. E of Huntington. Drlg. 420 ft.

Bowie County

Woodley Pet. Co. No. 1 Lumpkin. S.D. 3,260 ft.

Cherokee County

Humble O. & R. Co. No. 1 S. D. Goodson, 800 ft. from N and 700 ft. from W. I. Reynolds Sur., 4 mi. SW of Jacksonville. Rig.

Peveto et al No. 1 C. R. Kelley, 150 ft. out of NW cor. of Jose Pineda Sur., 3 mi. N of Jacksonville. Pecan 2,440-2,772 ft.; Austin 4,420 ft.; drlg. 4,432 ft.; elev. 565 ft.

Falls County

E. L. Chapman et al No. 1 S. Grocholski, 650 ft. from most EW line and 900 ft. from SS line of survey, in SE cor. of county. R.U.

Franklin County

Lacey Pet. Co. No. 19 W. Crawford. 1,048 ft. from N and 150 ft. from W line of O. James Sur. Drk.

Freestone County

Clark & Cowden No. 1 M. Scott, Church Lot in Amalt Sur., 7 mi. N of Fairfield. S.D. 31 ft.

Grayson County

Olson Drlg. Co. No. 1 Southwestern Life Ins. Co., J. C. Jamison Sur., 6 miles NW of Denison. Elev. 767 ft. Top Viola 4,-901 ft.; top Woodford 4,474 ft.; drlg. 5,-761 ft.

P. A. Shaver No. 1 Wm. Blair, 900 ft. from S of survey and 10 ft. from Cook-Grayson County line, R. H. Deavers Sur., 1½ mi. SW of Tioga. S.D. 89 ft.

Henderson County

McDougal et al No. 1 E. Price, 965 ft. S and 660 ft. E of most westerly W line, M. Mathews Sur., 4 mi. S of Trinidad. Drk.

Kaufman County

Scott & Woodside No. 1 Robinson, A. Cherino Sur., 800 ft. SW line and 500 ft. NW line, 80-ac. tr., 2 mi. W of Scurry. Drk.

Lamar County

J. Forrester et al No. 1 J. E. Woodward, L. Highton Sur., but in J. W. Woodward Sur., 1 mi. E of Mintel. Top Paluxy, 3,060 ft.; elev. 402 ft.; top anhydrite 3,735 ft.; S.D. 4,516 ft.

North Texas Synd. No. 1 Haynes & McCuistion, 600 ft. from S and 350 ft. from W line of A. W. Wright Sur., 4 mi. NE of Garrett Bluff. Spudding.

Limestone County

C. L. Lytle No. 1 J. L. Thompson, P. Varella Sur., Mexia field. Drlg. 5,815 ft.

Nacogdoches County

Overtex Oil Co. No. 1 Hazelwood, J. L. Ewing Sur., 15 mi. S of Nacogdoches. Drlg. 5,561 ft.

Red River County

Abercrombie-Harrison No. 1 Temple Lbr. Co., D. D. Bruton Sur., 10 mi. NE of Clarksville. R.U.

Midwest and Texhomia Oil Co. No. 1 Hacker & Hughes, M.E.&P. Sur., 9 mi. NE of Talco. S.D. 200 ft.

Orr et al No. 1 Kurth Lbr. Co., Smith Sur. Top Georgetown 600 ft.; S.D. 1,-060 ft.

Williams et al No. 1 L. and O. Roberts, James Bankston Sur., 2 miles NE of Annona. Elev. 396 ft.; S.D. 725 ft.

Rusk County

McCallum et al No. 1 E. C. Gary, John Piburn Sur., 5 miles S of Henderson. Elev. 338 ft.; S.D. 3,750 ft.

Pure Oil Co. No. 1 W. H. Faulkner, Wm. Elliott Sur., S of Concord. Elev. 583 ft.; top Georgetown 3,450 ft.; S.D. 3,481 ft.

J. W. Shipman et al No. 1 Citizens Natl. Bank, NE cor. of 125-ac. tract, J. J. Y'Barbo Sur., 4 miles NE of Henderson. Fsg. 3,510 ft.

Titus County

Humble O. & R. Co. No. 1 M. B. Groves, Ben Jones Sur. Cut fault at 1,642 ft.; Top Woodbine 3,240 ft.; ran Schlumberger; no showing; S.D. 4,492 ft.; T.A.

Humble O. & R. Co. No. 1 M. Galt, R. Winn Sur. 1½, S.E. Talco; elevation 346 ft.; Georgetown 3,444-4,169 ft.; to core 4,200 ft.

Humble O. & R. Co. No. 2 Groves, B. Jones Sur. Elev. 352 ft.; Pecan 1,660-1,854 ft.; drlg. 2,475 ft.

Magnolia No. 1 Carr, M. V. Delgado Sur. Elev. 371 ft.; S.D. 240 ft.

B. C. Morrison No. 1 L. Sanders, C of Lot 1, Blk. 30, Talco townsite. Loc.

EAST TEXAS

(Border Counties)

Cass County

American Liberty Oil Co. No. 1 Marcus Rembo, J. H. Reeves Sur. Cg. 5,585 ft.

American Liberty Oil Co. No. 2 Maxie, John Collum Sur. Drlg. 3,680 ft.

American Liberty Oil Co. No. 3 Maxie, John Collum Sur. Set 16-in. 221 ft.; set 10¾-in. 2,020 ft.

McElvane et al No. 1 Beckett, John Collum Sur. Set 16-in. 230 ft.; set 10¾-in. 1,991 ft.

R. W. Norton No. 2 Haywood, Priscilla Evans Sur. Set 13⅜-in. 219 ft.; set 9⅝-in. 2,097 ft.

R. W. Norton No. 3 Mary Rives, John Collum Sur. Cg. 6,003 ft.

Texas Co. No. 1 E. E. Hall, James Young Sur. R.U.

United Gas Pub. Ser. Co. No. 1 Eva Fields, John Collum Sur. Set 13⅜-in. 325 ft.

United Gas Pub. Ser. Co. No. 2 Eva Fields, John Collum Sur. R.U.

Harrison County

R. C. Payne et al's No. 1 Lowery, H. D Spain Sur. P.B. to 3,524 ft.

Marion County

Ed S. Holman's No. 1 Henderson, R. Bennington Sur. P.B. to 3,448 ft.

Panola County

George Hudson et al's No. 1 J. F. Nail, C McGeary Sur. Set 8-in. 40 ft.; fshg. for core bbl. at 3,345 ft.

Geo. Le Grand No. 1 P. J. Wardleigh, A. Thompson Sur. Set 10-in. 62 ft.

N. C. TEXAS WILDCATS

Archer County

C. Crosby No. 1 Ray, Blk. 150, Harris Sub. Drlg. 1,135 ft.

Deep Oil Dev. et al No. 1 Wilson, sec. 76, A.T.N.C. lands. Drlg. 2,000 ft.

J. D. Hardegree No. 1 Gus Symank, Blk. 11, Meade Sur., L.&M. Subdvn. Drlg. 310 ft.

Pace Pet. Co. No. 1 J. Dardek, T.E.&L. Sur. No. 1,582. Spudded.

Wilson-Ligon No. 1 M. B. Kelb, Blk. 116, Harris Subd. R.U. and S.D.

Baylor County

Consolidated Oil Co. No. 1 Portwood BB, T.E.&L. Sur. No. 1,573. Drlg. 725 ft.

K. R. March No. 1 W. B. Self, A. Hines A-156. Drlg. 1,000 ft.

Morris & Spoonts No. 1 D. K. Martin, sec. 212, T.&N.O. Sur. A-748. Drlg. 960 ft.; S.D.

Morris & Spoonts No. 1 J. M. Parker, B.B. B.&C. Sur., sec. 148, Blk. A. Spudded and S.D.

W. P. Morris et al No. 1 C. T. Porter, Edward Brown Sur. Sand with S.O. and gas 1,320-24 ft.; T.D. 1,333 ft.; fshg.

Cooke County

Anderson & Kerr No. 1 C. A. Steizer, T. B. Stroud Sur. No. A-950. Drlg. 2,000 ft.

Cain & Chandler No. 1 J. B. Burch, J. McWilliams Sur. A-658. R.U.R.

Hardin Oil Co. No. 1 J. G. Bonner, J. Lindheimer Sur. Drlg. 2,150 ft.

B. H. Hilburn No. 1 Hugan, A. Myers Sur. No. A-640. Drlg. 30 ft.

Lanier et al No. 1 Thetford, S.P.R.R. Sur. A-987. Drlg. 1,305 ft.

L. A. Long et al No. 1 Sarles, Hunt County School Lands Sur. A-440. 5-in. 2,332 ft.; S.D.O.

Hank Masterson No. 1 R. J. Timms, J. W. McPherson Sur. A-696. Trace oil; drlg. 1,797 ft.

N. Newburn No. 1 Dotson, Wm. Campbell Sur. A-238. S.D. 1,543 ft., drill pipe.

Petroleum Producers No. 1 J. W. Mount, J. C. Meeks Sur. A-758. T.D. 1,650 ft.; P.B. and testing.

L. E. Rader No. 1 McCubbin, R. Wheelock Sur. A-1,684. Sand 1,556-66 ft.; fishing; pipe stuck.

W. F. Russell No. 1 Belle Payne, Marshall University Sur. A-620. Drlg. 1,078 ft.

J. M. Russell et al No. 1 B. B. Bawley, Blk. 24, John Barnett Sur. Cleaning out 640 ft.

Seitz, Comegys & Seitz No. 1 Field & Bowers, L. Raney Sur. A-878. Location.

Sunray Oil Co. et al No. 1-A A. C. McCall, W. H. White Sur. A-1,134. Drlg. 4,600 ft.

B. F. Thompson No. 1 F. Trubenback, P. Davidson Sur. A-337. Drlg. 785 ft.

United Prod. Co. No. 1 Mount, S.P.R.R. Sur., sec. 9. R.U.R.

Whitehead et al No. 1 W. Reed, F. Earthman Sur. A-349. Drlg. 695 ft.

Woodbine Oil Co. No. 1 Potter & Potter, J. Gorham Sur. Drlg. 997 ft.

Denton County

Jack Caudle et al No. 1 B. D. Jones, John Morton Sur. S.D.

Oil Finance Corp. No. 1 J. S. Gambill, T. Burress Sur. S.D.

C. S. Hoad No. 1 Travelers Insurance Co., Wm. A. Thompson Sur. A-1,238. Drlg. 850 ft.

Foard County

Humble O. & R. Co. No. 1 Burnett, sec. 16, Blk. X, S.P.R.R. Sur. Fishing 3,210 ft.

Jack County

Bryson Oil & Gas Co. No. 1 G. E. Evett, Geo. Hardesty Sur. A-294. Drlg. 3,918 ft.

J. W. Cole et al No. 1 Mrs. D. C. Clayton, Lewis Knight Sur. A-324. R.U.R.

S. B. Edwards No. 1 Bryson, J. Hughson Sur. A-256. R.U.R.

Engineers Oil Co. No. 1 Cooke, J. Young Sur. Drlg. 1,800 ft.

W. H. Hammon No. 1 G. E. Evett, H. Plaster Sur. Spudded and S.D.

W. H. Hammon et al No. 1 F. H. Rhodes, R. N. Erwin Sur. A-1,378. Spudding.

Harper Pet. Corp. No. 1 Van Hooser, J. W. Morrow Sur. A-1,926. Drlg. 1,200 ft.

C. Kadane No. 1 E. F. Smith, S.P.R.R. Sur. A-552. Drlg. 973 ft.

Nelson Oil Synd. No. 1 J. P. McCoy, A. S. Ensworth Sur. Est. 40 bbls.; P.O.P.

Panhandle Ref. Co. No. 1 Klingiesmith, M. Hamilton Sur. A-263. Drlg. 2,900 ft.

Ray & Staniforth No. 1 L. J. Hestor, J. Ash Sur. A-8. Drlg. 1,255 ft.

Montague County

A. Gutowsky et al No. 1 J. E. Lemmon, Blk. 13, C. K. Hamm Sur. A-322. Drlg. 1,480 ft.

E. T. Hart No. 1 W. L. Davis, sec. 12, Jack Co. School Lds. Drk.

Jim Seeds et al No. 1 Coombs, sec. 54, M.E.P.&P. Sur. Drlg. 1,330 ft.

J. M. Holmes No. 1 H. D. Field, sec. 55, M.E.P.&P. Sur. A-528. S.S.O. 2,226-30 ft.; testing.

Wichita County

Fisher & Moore No. 1 Gibson, sec. 302. Sand 1,884-60 ft.; C.O. 1,935 ft.

Pete Harmon et al No. 1 J. B. Jamison, J. Deck Sur. A-52. R.U.R.

Reno Oil Co. No. 1 W. T. Waggoner-D, sec. 1, S.&M. Sur. A-393. Drlg. 1,200 ft.

Wilbarger County

Franklin Oil Co. No. 1 D. G. Feller et al, sec. 108, Blk. 14, H.&T.C. Sur. S.D. 1,570 ft.

Lane & Simons No. 1 Allison, sec. 48, H. &T.C. Sur., Blk. 13. S.D. water.

Pois & Schultz No. 1 W. T. Waggoner, sec. 102, H.&T.C., Blk. 14. Drlg. 960 ft.

Ed S. Smith et al No. 1 W. T. Waggoner, sec. 50, Blk. 14, H.&T.C. Sur. Sd. 1,850-52 ft.; drlg. 1,890 ft.

Smith No. 1 S. A. Dill et al, sec. 32, Blk. 14, H.&T.C. Sur. S.D. 2,090 ft.

L. Webb No. 1 J. L. McCrary, sec. 64, H.& T.C. Sur., Blk. 14. Loc.

Wheeler et al No. 1 W. T. Waggoner, sec. 99, H.&T.C. Sur., Blk. 14. Drlg. 2,100 ft.

Young County

L. T. Burns No. 1 C. E. Braune, T.E.&L. Sur. 188. Location.

L. T. Burns No. 1 Logan, sec. 70, T.E.&L. Sur. Derrick.

Christie Bros. No. 1 Primitive Baptist Church, S. L. Hill Sur. A-126. P.B. 2,814 ft.; testing.

C. C. Counts No. 1 W. E. Edwards, T.E.& L. Sur. 71. Testing 1,416-18 ft.

Curtis & Bracken No. 1 Allar Co., H. Garmes Sur. A-104. P.B. to 3,800 ft.; est. 50 bbls. 3,725-50 ft.

Dobbs Oil Co. and McLester No. 1 Laquey, J. Busse Sur. A-1,570. Drlg. 4,110 ft.

Nash & Windfohr No. 1 W. S. Simms, D. Franklin Sur. A-1,425. Testing 3,726-89 ft.

C. D. Neff et al No. 1 W. A. Dennis, C. F. Bass Sur. Drlg. 2,550 ft.

Pitzer & West No. 1 Harrell, J. Daily Sur. A-78. Drlg. 2,265 ft.

Pitzer & West No. 1 S. L. Thornton, sec. 1,015, T.E.&L. Sur. A-824. Drlg. 3,910 ft.

Rathke Oil Co. No. 2 J. T. Rogers, S. H. Graham Sur. A-124. Drlg. 3,930 ft.

Rocky Mountain Runs

Production estimates for the week ended April 25:

WYOMING

	Bbls.
Salt Creek	16,730
Big Muddy	1,470
Badger Basin	40
Black Mountain	30
Byron	30
Dallas Derby	590
Dutton Creek	40
Elk Basin	160
Ferris	30
Frannie	1,110
Grass Creek	620
Hamilton Dome	960
Hudson	260
LaBarge	1,120
Lance Creek	3,180
Lost Soldier	1,710
Midway	30
Oregon Basin	1,910
Osage	590
Pilot Butte	30
Rock River	2,280
Poison Spider	60
Teapot	10
Waugh Dome	170
Total Wyoming	33,140

MONTANA

Buckley-Border	40
Cat Creek	610
Cut Bank	6,960
Dry Creek	400
Kevin-Sunburst	3,240
Lake Basin	50
Pondera	1,070
Total Montana	10,670

COLORADO

Florence	170
Fort Collins and Wellington	250
Iles dome	3,860
Moffat	400
Orchard	50
Rangely	30
Tow Creek	130
Total Colorado	5,090

NEW MEXICO

Artesia	630
Cooper	5,270
Eunice	16,120
Hobbs	26,810
Hogback	200
Jal	3,290
Lea	890
Maljamar	1,780
Monument	4,920
Rattlesnake	760
Table Mesa	70
Total New Mexico	63,790
Total Rocky Mountain region	112,690

Southwest Texas Fields

(Continued from Page 62)

sand at 2,077-90 feet into a lower sand which showed water, and was plugged back to the gas sand which is the Mirando sand producing in the field and completed. The results of the test indicate an eastward trend for the field on the north, probably carrying production across the border into Duval County. Six producers including two gassers were completed in the field during the week. O'Hern, to the south received two producers and one test was abandoned.

PERSONAL

O. D. (DON) CRITES, formerly assistant manager of the crude oil department for the Shell Petroleum Corporation at Houston, Tex., has been promoted to manager of the department, succeeding BRUCE C. CLARDY, who resigned to join the newly chartered firm of Heyser, Heard and Clardy, independent operators and drilling contractors of Dallas. Mr. Clardy has been elected president of the firm and for the time being will reside in Houston. Mr. Crites has been connected with Shell Petroleum Corporation for 10 years, joining the company in 1925 as head of the title section of the land department. Prior to that he was with the Gulf Production Company for a number of years.

DR. LEO J. PETERS, geophysical department, Gulf Oil Corporation, has been transferred to Tulsa.

W. McKENZIE and F. R. SMITH of Sunshine Oils, Ltd., of Vancouver, British Columbia, recently inspected the company's acreage in southern Alberta near Lethbridge.

H. D. BURKE, western Canada manager of the British-American Oil Company with headquarters at Winnipeg, Manitoba, recently visited Edmonton, Alberta, on business.

HAROLD NEELEY, president of the Iron Mountain Oil Company, Fort Worth, Tex., is home after a short stay in Methodist Hospital in that city because of a touch of pneumonia.

MARSHALL YOUNG, vice president of Roeser-Pendleton, Inc., who has had headquarters at Breckenridge, Tex., for a number of years, is moving to the main offices at Fort Worth on May 1.

H. SMITH CLARK, chief geologist of the Texas division for the Sinclair Prairie Oil Company with headquarters at Fort Worth, Tex., was a business visitor to the company's offices at Houston, Tex., the past week.

CHARLES F. ROESER, president of the Independent Petroleum Association of America, and H. B. FELL, executive vice president of the association, attended the monthly oil forum held in Los Angeles April 24.

HARRY GRAHAM, Standard Oil Company of Louisiana, New Orleans, La., has been appointed member of the American Petroleum Institute committee on railroad transportation to succeed R. W. J. FLYNN, Mr. Graham also has been appointed chairman of the special subcommittee on side tracks. E. D. SHEFFE, Standard Oil Company of New Jersey, New York, N. Y., has been appointed member of the subcommittee on legal subjects to succeed Mr. Flynn.

EDGAR L. LIEBER, head of the Commercial Oil and Gas Company, of Michigan, will be president of a newly combined corporate unit including the Commercial, Allen Park Oil and Gas Corporation and Prudential Oil and Gas Corporation.

FRED W. TURNER and associates last week completed purchase of the interests of J. P. GORDON, of Columbus, O., in the Gordon Oil Company, Mt. Pleasant, Mich. Mr. Gordon, a founder of the business, has retired. HOWARD D. ATHA has been elected president and Mr. Turner on the board to succeed Mr. Gordon.

LEO HENDRICKS, geologist with Sinclair Prairie Oil Company, at Midland, Tex., has resigned to accept a position with Pinerock Oil Company. His place was filled by E. HAZEN WOOD, geologist with Superior Oil Company. H. S. FERGERON now occupies the vacancy left by Mr. Wood. HENSON ALLAGOOD, formerly geologist in the office of Amerada Petroleum Corporation, has joined the geological staff of the Sinclair Prairie Oil Company.

HARRY ADAMS, formerly associated with WALTER O'BANNON in Tulsa is now with Chas. N. Huff Company of Franklin, Pa., representing that company in West Texas and New Mexico.

GERALD WILCOX and L. G. DONNELLSON have been named president and secretary-treasurer of the Osage Oil & Gas Corporation with headquarters in Detroit, Mich.

J. A. BROWN, president of the Socony-Vacuum Oil Company of New York, heading a group of officials of that company from New York, including A. F. CORWIN, F. S. FALES and H. F. SHEETS, vice president; GEORGE V. HOLTON, general counsel; W. F. BURT, manager of refineries; B. B. JENNINGS and ROBERT SIEGEL have concluded a trip through the Mid-Continent, conferring with Magnolia Petroleum Company officials in Dallas, Tex.

WILLIAM R. QUATTROCCHI, assistant general sales manager, Warner-Quinlan Company, was reelected president of the Fuel Oil Association, New York, and received a handsomely engraved watch, the presentation being made by B. L. BOYE, Socony-Vacuum Oil Company, new president of the Asphalt Institute. A watch was also given to J. T. MARKS, president, Sunrise Oil Company, Queens County, in recognition of his work as chairman of the entertainment committee.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Charles Page, who arrived in Tulsa 10 years ago from Cripple Creek with $16,000 cash, has sold Oklahoma oil properties to California men for $1,000,000. In last six years he has acquired a rating of $2,000,000.

Dennis J. McMahon, Butler, Pa., born in Ireland 76 years ago and employed in the early Pennsylvania oil fields, died in Shreveport, La., where he was visiting a daughter. He had been in the service of the Standard Oil Company 35 years and for the last 15 years was retired on pension.

Charles M. Schwab reported to be about to revolutionize gas manufacturing business by utilizing the immense quantities of gases now wasted at steel and iron mills.

20 YEARS AGO

H. F. Sinclair announces organization of Sinclair Oil & Refining Company with capital of $50,000,000. John R. Manion, head of its pipe line system, is honor guest at a banquet given by his former Prairie Pipe Line Company associates.

A well near Hornell, N. Y., yields "canary oil," containing 55 per cent gasoline. It can be used in crude state to operate an automobile. Well started at 14 barrels, now doing a bucketful.

From a depth of 600 feet a well near Taft, Calif., broke loose and for eight hours sent clouds of dust, gas, gravel and fragments of rock into the air in spectacular fashion. Tools tore away the crownblock.

10 YEARS AGO

Public Service Company of Colorado and New York Oil Company planning to construct $12,000,000 pipe line to supply Denver and southern Colorado with natural gas from the Amarillo field.

Bill Long, oil and gas operator, supply man and oil-field poet, died in Sand Springs, Okla., hospital.

Effect of British strike as it affects oil exports from this country is assuming serious proportions.

P. F. MARTYN, chief geologist of the Houston Oil Company, Houston, Tex., addressed the Dallas Petroleum Geologists April 27 on the Refugio field in Southwest Texas.

FRED T. MANNING, president of Manning & Martin, Inc., of Denver, Colo., and Tulsa, was in Lusk, Wyo., the past week inspecting the operations of the company in the Lance Creek field.

J. A. WARREN, secretary of the Kinney-Coastal Oil Company, has returned to headquarters in Denver, Colo., from an inspection trip to the company's properties in the Garland district in Wyoming.

EARL H. ROUSE, representing the Edwin H. Fitler Company, Philadelphia Cordage Works, Philadelphia, Pa., is visiting Tulsa until after the International Petroleum Exposition. MRS. ROUSE is visiting Oklahoma City.

GLEN WAHLSTROM, in the engineering department of Baroid Sales Company, Ada, Okla., was married to MISS ESTELLE MOORE of that city on April 18. After a short honeymoon in Texas they will be at home in Ada.

JACK W. JORDAN, formerly superintendent in the East Texas field for the Sinclair Prairie Oil Company, has been transferred to Midland to be in charge of the West Texas-New Mexico division newly formed by the company.

LOUIS B. (TIP) O'NEIL was reelected president of the Santa Rita Oil & Gas Company at the annual stockholders meeting at Cut Bank, Mont. GEORGE M. McCABE and FOSS POYNTER were elected vice presidents; V. R. NELLES, secretary and treasurer, and M. V. MORGAN, assistant secretary.

PARAGRAPHS

JERRY E. HOBSON, manager Odessa, Tex., branch of Parkersburg Rig & Reel Company, is recovering from a serious attack of influenza and pneumonia.

PHIL MARTYN, chief geologist, Houston Oil Company of Houston, Tex., addressed the San Antonio Geological Society last week. His paper represented a very exhaustive study of the geology of the Refugio field and was voted one of the most valuable papers ever presented before the society.

NED B. MORRIS, JR., Palestine, heads the East Texas Oil Land Association, which has established headquarters at Palestine, Tex. Other members of the executive board are: MARTIN A. DAVEY, JR., JIM VALENTINE, JOHN H. REAGAN, JOE MONNIG, HAROLD H. DIETZ and JOSEPH C. PEACOCK.

C. R. MINOR, Gulf Oil Corporation; C. N. BLACK, Magnolia Petroleum Company, and CHARLES G. LASKEY, of Belchic & Laskey, have been elected vice presidents of the Louisiana-Arkansas division, Mid-Continent Oil and Gas Association. TINSLEY GILMORE, Humble Oil & Refining Company, Lake Charles, La., was elected a director of the general Mid-Continent board.

ANDREW WOLSEY has returned to Petrolia, Ontario, after five years drilling in the southern Alberta fields.

CHARLES C. ROSS, minister of lands and mines for Alberta, has returned to Edmonton after spending several weeks in eastern Canada.

BOB DICKEY, in the exploration department of the Stanolind Oil & Gas Company, Midland, Tex., is emerging from a local hospital after an appendectomy.

MAX BALL of Denver, Colo., head of Abasand Oils, Ltd., which is planning to develop the Athabaska tar sand deposits, was in Edmonton and Calgary recently.

JOHN HERBERT, president of the Herbert Oil Company of Fort Worth, Tex., has been laid up in St. Josephs Hospital in that city from a throat infection, but is home again.

HERMAN McKINNON, of the Marathon Oil Company, has been transferred from the laboratory staff at the Bristow, Okla., refinery to the production department at Edmond, Okla.

WILTON W. LARUE, vice president of McCollum Exploration Company, Houston, Tex., is rapidly recovering at the Medical Professional Hospital in Corpus Christi, Tex., where he underwent an operation for appendicitis.

W. ALTON JONES, vice president of the Cities Service Oil Company, F. W. TER MEULEN, foreign representative; R. E. BERGER, vice president of the Cities Service Power & Light Company; J. A. SANDBERG, Holland representative of the company, and others, made a flying visit in a twin-motored transport plane to Denver, Colo., last week.

JOHN F. EATON, sales engineer, Tulsa, for Jarecki Manufacturing Company, was married on Sunday, April 26, to MISS MARY CHAPIN, who was formerly with the Stanolind Oil & Gas Company of Tulsa.

E. G. STARR was elected president of the Universal Consolidated Oil Company at the annual meeting, R. E. STEARNS vice president, R. D. MILLER secretary, and G. A. ZANOT treasurer and assistant secretary. DAVID R. FARIES, J. W. PAUSON, D. F. TYLER, F. S. WADE and C. G. WILLIAMS were elected to the board of directors.

JOHN FARRELL, independent operator of Fort Worth, Tex., and family will participate in the inauguration of GOVERNOR R. W. LECHE of Louisiana on May 12 and then sail from New York for England on May 21. Mr. Farrell's home was in Manchester, England. They will make a tour of the Continent after a several weeks' stay in England.

HUGH CORROUGH, engineer for the oil division of the Cities Service Company has been spending several weeks in the Empire Oil and Refining Company offices in Tulsa working on special problems. Mr. Corrough left Tulsa Thursday for his home and office in New York City. Prior to his transfer to the eastern offices of the company about one year ago Mr. Corrough was engineer for the refining division of the Empire with offices in Tulsa.

R. J. GOULD, of Flint, Mich., head of the Citizens Fuel Company, oil product distributing concern, has been named president of the newly enlarged skimming plant at Elsie, Mich. HERBERT J. SMITH, retiring president, will retain his membership on the board.

Heads Market Division

Harry J. Kennedy, advanced last week to vice president of the Continental Oil Company in charge of the marketing department, lost no time in getting into the oil business following his discharge from army service in the World War. He didn't fool around the bottom of the ladder, but on being offered the position of president and general manager of the Marland Oil Company of Indiana, a subsidiary of the old Marland Oil Company, with offices in Hammond, Ind., promptly accepted. That was in October, 1919. Later Mr. Kennedy was transferred to Ponca City, Okla., Marland headquarters, as manager of the company's southwestern marketing division.

HARRY J. KENNEDY

In 1928, Mr. Kennedy was promoted to general sales manager. The next year he was sent to New York as eastern sales manager, continuing in that position following the merger of the Marland organization with Continental. In February, 1930, he was made general sales manager of Continental and he was holding that post at the time of his promotion to vice president.

Born in Caledonia, Minn., 41 years ago, Mr. Kennedy went through the grade and high schools there. He was studying law in the University of Washington when he entered the aviation service. In 1920 he married Miss Ruth Stewart, whom he had met while assigned to the air service headquarters in Washington, D. C., where she was secretary to Gen. "Billy" Mitchell. Mr. Kennedy's hobby is collecting arts and crafts of Southwestern Indians.

ROY E. RAEMER, of the Knox Refining Company, Enid, Okla., was in Tulsa on oil business several days last week.

LEE A. POTTER, vice president of the Barnsdall Refining Corporation of Tulsa, visited Toronto recently on business.

E. B. (HARD ROCK) COOLIDGE of Great Falls, Mont., recently made a business trip to Calgary and Lethbridge, Alberta.

DAVID ZIMMERMAN of Vancouver, British Columbia, president of Range Oil & Gas Company, visited Calgary recently on business.

DAVID B. CRAWFORD, president of the Parkersburg Rig & Reel Company, Parkersburg, W. Va., is making a trip through the Mid-Continent.

W. G. TSCHUDEN, in charge of operations for Sinclair-Mex Oil Corporation at Tampico, Mexico, spent several days in Houston, Tex., on business the past week.

R. C. QUIETT, geologist and independent oil operator of Shawnee, Okla., returned from a visit to West Texas fields and came to Tulsa on a business mission last week.

GLENN HARROUN, production superintendent for the Texas division for Sinclair Prairie Oil Company, was a business visitor to the company's offices at Houston, Tex., last week.

JOHN EMERY ADAMS, district geologist for the California Company at Midland, addressed the West Texas Geological Society at Midland on "An Oil Pool of Open Reservoir Type." The society plans a field trip to the Marathon Basin in Brewster County May 9 and 10 to study the older Paleozoics.

Eastern Gasoline Markets Remain Firm

Except South Jersey, Philadelphia

NEW YORK, Apr. 25.—The eastern motor fuel markets remained firm during the past week, with the exception of the Philadelphia and southern New Jersey areas, where if anything the competitive situation has turned for the worse. Wholesale gasoline continues the chief bulwark against general weakness in the price structure in this territory. In the Philadelphia area there is unmistakable evidence of the existence of distress material originating outside the area. Probably it consists in a cargo lot unloaded at some port near Philadelphia. If so, as soon as the supply is exhausted, the market will return to normal.

A general reduction in the tank-wagon and retail gasoline market in Philadelphia was inaugurated on April 24 and was followed by most other companies on April 25. It brings the market considerably below the average for adjacent territory. The general run of majors cut prices 1 cent per gallon to 16 cents tank-wagon and 18 cents retail, including 5-cent tax. Some of the smaller organizations are reported to have reduced their quotations 1½ cents bringing their prices one-half cent below the majors. It is also reported that some of the large companies cut their dealers' margins one-half cent and that the smaller companies have temporarily eliminated all customers' discounts.

The fact that the Atlantic Refining Co., on the same day that it cut Philadelphia prices 1 cent, raised quotations in Pittsburgh the same amount, indicates the local nature of the situation in the coastal area. Other points of disturbance along the coast are in a portion of the metropolitan area of New York and in Boston, where conditions are about the same as those reported a week ago.

The eastern territory is still experiencing subnormal temperatures with its natural effect in reducing motor travel below what it would be under weather conditions usually expected at this time of year. Although despite this gasoline consumption is reported to be running well above that of a year ago, marketers and refiners would welcome a period of warm weather which would give them an opportunity to materially cut their inventories, which are heavy both at refineries and bulk stations, particularly the latter.

Marketers here who have their fingers on the pulse of the national situation believe that if shipments of cut-price gasoline from the southwest can be held down as they have during the past year and a half, with the East Texas situation well in hand, a much improved motor fuel market can be expected on the Atlantic Seaboard within the next few weeks. The chief danger now is said to exist in the form of active pipe line construction connecting new oil fields with Gulf Coast ports with parallel building of terminal facilities and the possibility that this will eventually mean cargo shipments to the Atlantic Seaboard in substantially increased quantities. On the other hand, such a development could not possibly be accomplished in time to affect the coming summer's gasoline trade. While gasoline marketers continue to have their competitive difficulties in certain sections, the fuel oil marketers seem to be having their day in the sun. The demand for furnace oil and industrial fuel oils has held up beyond expectations and some factors regret having offered price concessions in anticipation of a seasonal slowing down of business. In some quarters the strong fuel oil situation is expected to be shortly reflected by an advance in diesel oils for domestic and marine consumption, but there is considered to be little likelihood that furnace or industrial oil quotations will harden at this season of the year, despite the strong statistical position of these products.

Considerable Venezuelan crude oil of low gravity, topped crude oil and fuel oil is imported at Atlantic Coast ports. A large part of it is refined in bond for the foreign trade. No interference in shipments from Venezuela has occurred as yet, despite reported political unrest in that country. Importers appear confident that conditions in Venezuela will continue normal with the election of a new president.

Export Outlook

The Gulf Coast oil export markets continued rather dull but firm during the past week. One development which may eventually be reflected in increased activity in this market is the flight of gold from France and possibility that this nation may devalue its currency. An important aspect of this, as reported in international banking circles, is the establishment of large dollar credits in this country at the present time with shipments of gold here. These credits, it is said, will probably be used to buy goods here in the event of devaluation of the franc, and may include largely increased purchases of petroleum products in the American market, as well as crude oil.

Foreign oil markets have been fairly steady now for many months, but, as in the United States there are certain localities which are an exception to the rule. The seat of some present unsettlement is Holland, where, reports state, a small size gasoline price war is under way. The source of some of the distress material is said to be Rumania. One interesting feature of the situation here is that there is a price-agreement embracing organizations marketing more than 90 per cent of the country's gasoline, with the small minority nevertheless for the moment actually ruling the price structure.

Conditions generally in Europe, however, are said to look more hopeful from an industrial viewpoint. There is considerably more confidence in the outlook now than there was several weeks ago. The oil marketing organizations are anticipating a record gasoline season and are well stocked for it. In fact it is generally recognized in Europe that excessive emphasis on the political aspects of the situation at this time would be highly detrimental to the tourist trade, which plays such a large part not only in the general business situation in Europe, but particularly in the gasoline situation. It would therefore not be surprising to witness a considerable easing of tension and a more normal course of developments from now on. Italy is a nation which has a particularly heavy tourist trade in normal times; but tension in the Mediterranean which has prevailed throughout the winter and early spring is anything but an encouragement to tourists.

Tourist Trade

Many tourist agencies which assist Americans in their travel arrangements abroad have been stressing the advantages of touring Europe by motor. This trade is particularly valued in Europe because it means the transfer of American funds without any need for a return in the form of money or goods. It is clear gain to the Europeans. The trend on the part of some nations to ease the taxes which motor tourists from abroad have had to pay has been commented upon in these columns. France has been the leader in this movement and now this country is reported to be following the same policy in some of its colonies. For instance, in French Morocco, motor vehicle taxes are understood to have been recently eliminated. Unfortunately at the same time import duties on gasoline, kerosene and lubricating oils have been increased.

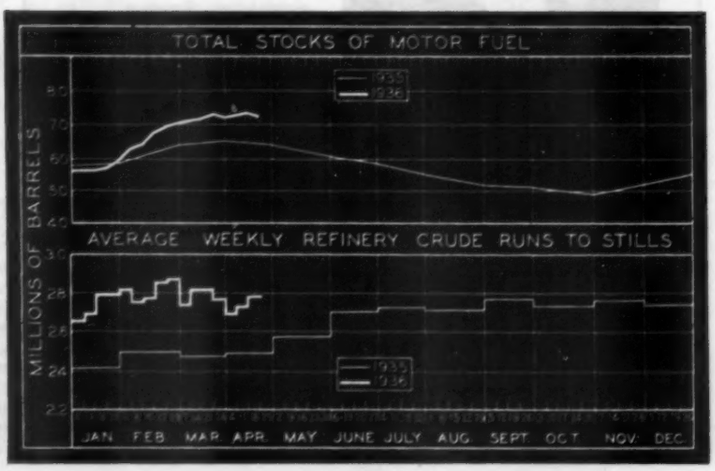
A. P. I. Weekly Refinery Statistics

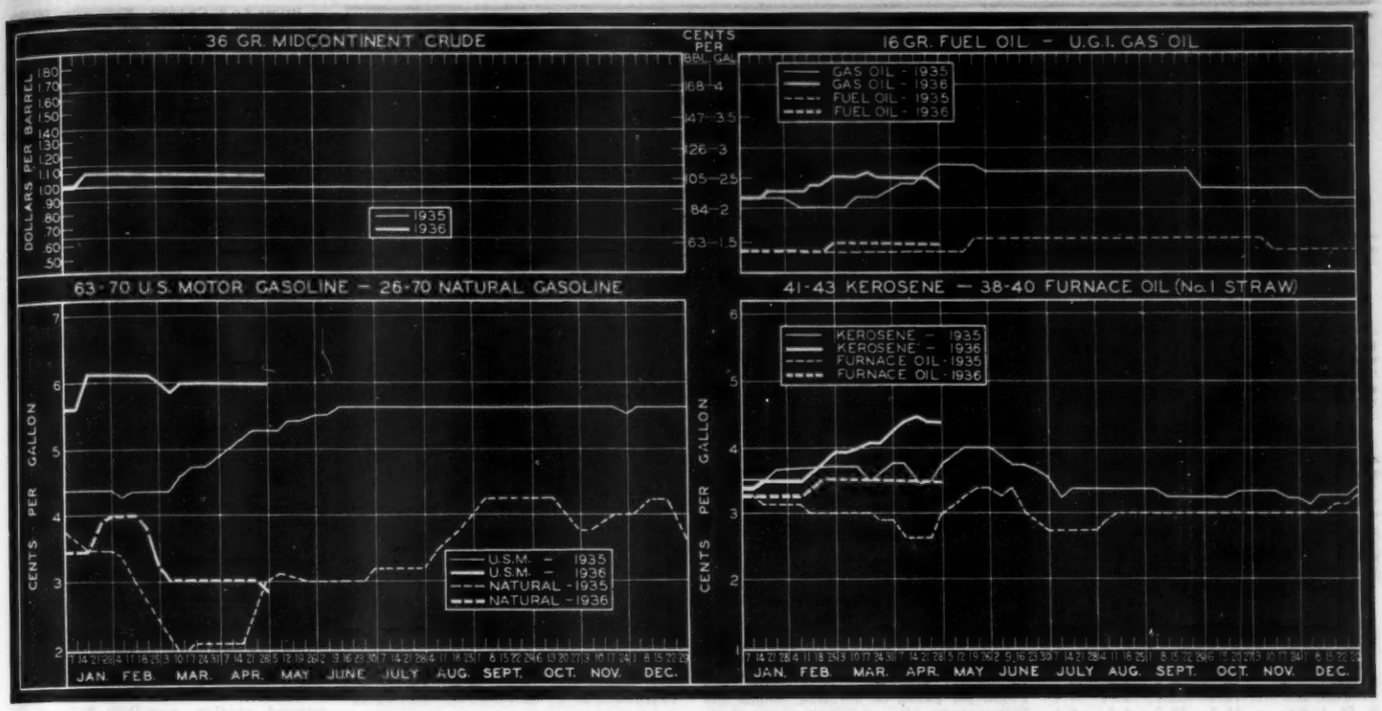
Week Ending April 25, 1936

(Due to delay in California reports, figures for week ending April 25 not available.)

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	456,000	20,021,000	6,717,000
Appalachian	94.8	103,000	2,805,000	482,000
Indiana, Illinois, Kentucky	95.9	391,000	11,660,000	2,927,000
Oklahoma, Kansas, Missouri	84.8	278,000	7,623,000	2,414,000
Inland Texas	48.5	99,000	1,754,000	1,502,000
Texas Gulf	96.8	575,000	8,381,000	6,487,000
Louisiana Gulf	96.4	118,000	1,944,000	2,028,000
North Louisiana and Arkansas	90.0	50,000	416,000	307,000
Rocky Mountains	61.9	46,000	1,710,000	738,000
California	92.6	486,000	12,575,000	71,245,000
Total reported	89.6	2,602,000	68,889,000	94,847,000
Estimated unreported	.....	193,000	4,126,000	1,907,000
*Estimated total	.....	2,795,000	73,015,000	96,754,000
*Estimated total previous week	.....	2,755,000	73,654,000	96,508,000
†April 30, 1935	.....	2,502,000	64,393,000	97,727,000

*Bureau of Mines basis currently estimated. †Monthly report, U. S. Bureau of Mines.


TOTAL STOCKS OF MOTOR FUEL
AVERAGE WEEKLY REFINERY CRUDE RUNS TO STILLS
MILLIONS OF BARRELS
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
CENTS PER BBL GAL
1935
1936
16 GR. FUEL OIL - U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE — 38-40 FURNACE OIL (No.1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Favorable and Unfavorable Factors Near Balance in Group 3 Market

By T. F. SMILEY

Favorable and unfavorable factors in the Group 3 market came somewhere near balancing each other this week. Little of fresh interest had developed to change the general aspect, and there were no illusions in the trade concerning the problem presented by total gasoline stocks in the United States of more than 73,000,000 bbls. Further signs of weakness in the retail price structure were observable, and another reduction in the prices of natural gasoline shed additional doubt upon the ability of tankcar prices of the refinery product to stay on their feet.

Gasoline Stocks Falling

Although a rise in the movement from refineries was reported, it was not of such volume as to make an impressive dent in the huge surplus stocks which must be disposed of before consumption can catch up to production. It was little more than a beginning of the normal seasonal increase expected at this time. In the Oklahoma-Missouri-Kansas district, according to American Petroleum Institute estimates, there were 4,850,000 bbls. of gasoline at refineries on April 11, and 4,724,000 bbls. on April 18, a reduction of 126,000 bbls. This drop was recorded notwithstanding a substantial increase in runs to stills.

Refineries and marketers are pinning their hopes on a smashing summer season, which they are disposed to believe will absorb excess accumulations on hand and take care of the regular week-to-week output. The weather continues to be the controlling factor. In many parts of the Group 3 consuming area the family car is still spending much of its time in the garage. Gradually, however, inviting motoring conditions are extending to more and more territory, accompanied by steadily increasing demand for gasoline. The trade is looking to this expanding consumption of motor fuel to continue until it records a peak surpassing the high one reached last year. From almost all northern points the last week-end was reported the most gratifying one this year.

Weakness in the retail market was growingly apparent. One small independent dealer in the Tulsa district offered third-grade gasoline to trucks and convoys at 13 cents. A competitor forthwith offered the same price to everybody. Thirteen-cent signs then appeared at other stations where 16 or 17 cents previously had been charged. The larger and well-established dealers refused to join in the price war. Secret rebates continued to be a source of complaint, however.

Refined Oil Market Barometer

Resumption of motor travel in widening areas released from disagreeable weather conditions is imparting a little life to the gasoline trade, but the bounding demands of mid-summer will be needed to dispose of immense inventories. Reported reductions in stocks encourage hope that optimistic prophecies for 1936 will be fulfilled.

MID-CONTINENT. Tankcar gasoline fairly steady. Retail market weak. Naturals down.

EAST COAST. Wholesale gasoline firm. Retail market weak in Philadelphia area.

GULF COAST. Gasoline and kerosene off.

PENNSYLVANIA. Lubricants up with prices higher. Entire list strong.

CALIFORNIA. Gasoline weak owing to secret rebates. Fuel oil steady.

CHICAGO. Gasoline quiet. Lubricants strong.

Competition among truckers in the East Texas field brought about a sharp descent in prices for gasoline eligible for intrastate tenders only. Reports are to the effect that material was available at 3½ cents a gallon. A week earlier 4½ cents had been obtained for it. All the gasoline involved was said to have been handled in trucks only, no tankcars having been used in transporting it even inside the state. There were said to be no surplus stocks of gasoline which could command federal tenders.

Natural Gasoline Down

Natural gasoline, which already had lost a quarter-cent in Texas, sank an eighth further and at the same time went down an eighth in Oklahoma. The explanation given for the drop was the simple and succient one that more natural gasoline was being produced than the refiners would buy. There is a question in the minds of some in the trade whether any more can be sold at the lower quotations. Buying for storage is likely to be stimulated a bit, however.

Although spring plowing has been delayed in many areas by adverse weather conditions, tractor distillates were firm and well bought up. At least one leading refiner was sold out and was trying to buy from other refiners. Quotations were unchanged. Kerosene was perhaps a little less in demand than last week, with the result that it was not so easy to get top prices for high-quality material. Furnace oils were in much the same case. A slightly firmer tone was noted in the fuel oils. Wax continued weak.

Bright stocks continued their upward movement and quotations annexed another half-cent. Demand was brisk and observers expressed the opinion that another raise was likely. Neutrals and steam-refined stocks were steady.

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of April 28, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Chicago	15.0	17.0	4.0	10.1
Decatur, Ill.	16.0	18.0	4.0	10.1
E. St. Louis	15.7	17.7	4.0	9.8
Joliet	16.0	16.5	4.0	10.1
Joliet	16.0	17.0	4.0	10.1
Quincy	15.8	17.8	4.0	9.9
Davenport, Ia.	16.0	(†)	4.0	10.1
Des Moines	15.8	(†)	4.0	9.9
Mason City	16.2	(†)	4.0	10.3
Sioux City	16.0	(†)	4.0	10.1
Duluth, Minn.	16.8	18.8	4.0	10.9
Mankato	16.4	18.4	4.0	10.5
Minneapolis	16.4	18.4	4.0	10.5
LaCrosse, Wis.	17.4	19.4	5.0	10.5
Green Bay	17.7	19.7	5.0	10.8
Milwaukee	16.8	18.8	5.0	10.4
Madison	17.4	19.4	5.0	10.5
Detroit, Mich.	14.0	16.0	4.0	8.8
Grand Rapids	16.4	18.4	4.0	9.3
Saginaw	16.6	18.6	4.0	10.1
Evansville, Ind.	17.7	19.7	5.0	10.6
Indianapolis	17.9	19.9	5.0	10.8
South Bend	18.1	20.1	5.0	11.0
Fargo, N. Dak.	17.4	19.4	4.0	11.5
Huron, S. Dak.	17.9	19.9	5.0	11.0
Sioux Falls	17.4	19.4	5.0	10.5
Kans. City, Mo.*	15.4	17.4	4.0	9.5
Springfield	15.1	17.1	4.0	9.2
St. Louis	15.7	17.7	4.0	9.8
St. Joseph*	15.4	17.4	4.0	9.5
Wichita, Kans.	14.9	16.9	4.0	7.1
Bartlesville, Ok.	15.0	19.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers except in Iowa: 3½ cents on premium and regular and 2½ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective February 10, 1936, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.75 cents; 100-149 gallons, 7.75 cents; 150 gallons and more, 7.25 cents. 1 (36-40 lt. stw. zero), less than 100 gallons, 8.75 cents; 100-149 gallons, 7.75 cents; 150 gallons or more, 7.25 cents; No. 2, (22-26 zero), less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents; No. 4 (12-16 zero), less than 400 gallons, 7.5 cents; 400 gallons or more, 6.5 cents, viscosity of No. 4, 85° and 100° F.; No. 5, less than 400 gallons, 5.75 cents; 400 gallons or more, 4.75 cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Denver, Colo.	17.0	19.0	5.0	11.6
Pueblo	17.0	19.0	5.0	13.0
Grand Junction	21.5	23.5	5.0	15.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	22.0	....	6.0	14.5
Billings	22.5	24.5	6.0	14.5
Helena	22.5	24.5	6.0	17.5
Great Falls	22.5	24.5	6.0	14.5
Salt Lake, Utah	31.0	33.0	5.0	16.0
Twin Falls, Ida.	25.0	25.0	6.0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.5	20.5	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.5
Augusta	20.0	22.0	7.0	*13.0
Macon	20.0	22.0	7.0	*14.5
Savannah	18.5	20.5	7.0	*13.0
Birm'ham, Ala.	21.0	23.0	8.0	13.0
Mobile	21.0	23.0	8.0	10.0
Montgomery	22.0	24.0	9.0	14.5
Jackson, Miss.	20.0	22.0	7.0	*13.0
Vicksburg	19.5	21.5	7.0	*13.0
Jacksonville, Fla.	18.0	20.0	8.0	12.0
Miami	19.5	21.5	8.0	13.5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20.0	8.0	12.5
Lexington, Ky.	19.0	21.0	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	18.0	19.0	6.0	8.5

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile and Birmingham, Ala., each have a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.5
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	19.5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20.5	6.0	13.5
Spokane	22.5	23.5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4 cent per gallon discount is given dealers and customers taking tank-wagon lots except in Phoenix where discount is 1 cent ‡Includes 5-cent state tax.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atl'tic City, N.J.	14.5	17.5	4.0	9.0
Newark	14.3	17.3	4.0	7.5
Annapolis, Md.	15.6	19.1	5.0	10.0
Baltimore	15.0	18.5	5.0	8.0
Cumberland	16.6	20.1	5.0	12.7
Wash'g'n, D. C.	13.0	16.5	3.0	9.0
Danville, Va.	17.5	21.0	6.0	13.9
Norfolk	16.0	19.5	6.0	11.3
Petersburg	16.5	20.0	6.0	11.7
Richmond	16.5	20.0	6.0	11.7
Roanoke	17.5	21.0	6.0	12.9
Charles'n, W.Va.	15.8	19.3	5.0	12.6
Parkersburg	15.1	18.6	5.0	11.2
Wheeling	16.0	19.5	5.0	12.2
Charlotte, N. C.	18.7	22.2	7.0	12.9
Hickory	19.0	22.5	7.0	13.1
Mt. Airy	19.0	22.5	7.0	13.2
Raleigh	18.4	21.9	7.0	12.7
Salisbury	18.8	22.3	7.0	13.0
Charleston, S. C.	17.0	20.5	7.0	11.2
Columbia	18.3	21.8	7.0	12.6
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Omaha	18.4	20.4	6.0	10.4
McCook	19.1	21.1	6.0	11.1
Norfolk	18.8	20.8	6.0	10.8
North Platte	19.2	21.2	6.0	11.2
Scottsbluff	19.9	21.9	6.0	11.9

Note: Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents; Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by Standard Commercial Consumers Contract, effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Philadelphia, Pa.	17.0	17.0	5.0	9.5
Pittsburgh	17.5	18.5	5.0	10.0
Allentown	17.0	17.0	5.0	9.5
Erie	17.5	18.5	5.0	8.0
Scranton	16.75	16.0	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	17.0	5.0	10.0
Wilmington	16.5	16.5	5.0	9.5
Springf'ld, Mass.	14.0	17.5	4.0	7.5
Worcester	15.5	17.0	4.0	7.75
New Haven	13.0	16.5	4.0	7.5
Provdence, R. I.	12.0	15.5	3.0	7.25

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
N. Orleans, La.	18.5	22.0	‡9.0	12.0
Baton Rouge	17.5	21.0	†7.0	11.5
Alexandria	18.5	22.0	††8.0	11.0
Lafayette	19.0	22.5	‡*8.0	12.5
Lake Charles	19.0	22.5	††8.0	11.0
Shreveport	17.0	20.5	†7.0	10.0
Knoxville, Tenn.	21.0	24.5	8.0	14.0
Memphis	19.0	22.5	8.0	11.0
Chattanooga	20.5	24.0	8.0	11.5
Nashville	20.0	23.5	8.0	10.0
Bristol	18.75	21.5	8.0	14.5

*Includes city tax of 1 cent.

†Includes 1-cent parish tax. ‡Includes 3-cent parish tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline: Post deal	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Albany, N. Y.	14.0	17.5	5.0	7.75
*Met. N. Y.:				
Manhtn., Bronx	14.2	19.2	5.0	7.25
Staten Island	14.2	19.2	5.0	7.25
Qu'ns & Br'klyn	14.2	19.2	5.0	7.25
Buffalo	14.5	18.0	5.0	8.25
Rochester	14.5	18.0	5.0	8.25
Syracuse	14.5	18.0	5.0	8.75
Boston, Mass.	12.5	16.0	4.0	7.5
Portland, Me.	14.5	18.0	5.0	7.75
Manch'ter, N. H.	15.0	18.5	5.0	8.0
Burlington, Vt.	17.0	20.5	5.0	8.75
Hartford, Conn.	14.5	18.0	4.0	7.0

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Dallas, Tex.	13.5	17.0	5.0	8.5
Fort Worth	13.5	17.0	5.0	8.5
Houston	13.5	17.0	5.0	8.5
San Antonio	13.5	17.0	5.0	8.5
El Paso	15.0	19.0	5.0	10.0
Muskogee, Ok.	15.0	19.0	5.0	8.0
Okla. City	13.0	17.0	5.0	8.0
Tulsa	15.0	19.0	5.0	8.0
Ft. Smith, Ark.	15.5	19.0	5.0	8.0
Little Rock	18.0	21.5	7.5	9.5
Texarkana	14.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 110-gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Ohio points	17.5	19.5	5.0	*13.1

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	30.3	33.2	7.0	23.3
Winnipeg, Man.	29.2	32.2	7.0	20.7
Regina, Sask.	30.5	33.4	7.0	23.0
Saskatoon, Sask.	33.3	36.3	7.0	26.1
Edmonton, Alta.	32.7	35.7	7.0	26.1
Calgary, Alta.	30.0	33.0	7.0	21.1
Vancouver, B. C.	26.0	29.0	7.0	26.0
Montreal, Que.	19.5	22.0	6.0	17.1
St. John, N. B.	25.0	29.0	8.0	19.1
Halifax, N. S.	25.0	29.0	8.0	19.1

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less.

Retail Price Changes

Standard Oil Co. of Louisiana April 18 reduced tank-wagon kerosene 1 cent in Shreveport.

Atlantic Refining Co. April 10 advanced station gasoline 1 cent in Pittsburgh; April 11 advanced tank-wagon gasoline 1 cent and station gasoline 2 cents in Erie; March 30 reduced station gasoline 2 cents in Allentown; March 27 reduced station gasoline 2 cents in Philadelphia.

Standard Oil Co. (Indiana) April 27 advanced station gasoline .5 cent in Joliet and on the same date advanced tank-wagon kerosene .5 cent in Detroit and Saginaw.

Magnolia Petroleum Co. April 22 reduced tank-wagon gasoline .5 cent and station gasoline 1 cent in Dallas: April 17 reduced tank-wagon gasoline 1 cent in Oklahoma City; April 25 reduced tank-wagon gasoline .5 cent and station gasoline 1 cent in Houston and San Antonio.

Standard Mileage Test

CHICAGO, Apr. 27.—Three hundred thousand motorists will be enlisted by Standard Oil Co. (Indiana) this summer in "the world's greatest road test" to determine what mileage the average car will obtain under average conditions from a gallon of gasoline.

From May 1 the company will furnish to all interested a handy booklet for keeping a record of gasoline purchases and mileage. With it will go a colorful emblem to mark the automobile as a research test car.

After driving 500 miles or more in the 65 days prior to September 18, the motorist may write into the book a 75-word summary of his experience and become a possible winner of one of the 700 cash and merchandise prizes ranging from $10 to $1,000 each.

C. L. West, of Abilene, Tex., has resigned as assistant state auditor to become auditor for the Texas Petroleum Council with headquarters at Longview.

American and British oil companies have protested alleged smuggling of kerosene and gasoline from Dairen, Manchukuo, into North China by way of East Hopei, which is said to be charging one-fourth of the duty levied by the Chinese maritime customs.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of April 28, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅝	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400 grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅝	.05⅝
68-70 octane (regular)	.06	.06¼
64-66 375	.05¼	.05⅝
68-70 360	.05¼	.05½

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅝	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400	.05	.05¼
64-66 375	.05¼	.05⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:	
62 octane and below	.05⅝
63-67 octane	.06½
68-70 octane (regular)	.06⅝
60-62 400	.05⅝ .06

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:	
62 octane and below	.05⅝
63-67 octane	.06½
68-70 octane (regular)	.06⅝

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅝	.05⅞
68-70 octane (regular)	.06	.06¼
60-62 400 grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅝	.05⅞
68-70 octane (regular)	.06	.06¼
64-66 375	.05⅛	.05⅝
68-70 360	.05¾	.05½

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:	
Below 60 octane	.05⅝
60-64.9 octane	.07
65-70 octane	.07¼
64-66 375	.05⅝
68-70 350	.06

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.05½ .06
58-60 400	.06¼ .06⅝

EAST COAST—

U. S. Motor, below 60 octane:	
*New York (Bayonne)	.06⅝
Baltimore	.06⅝
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.07
Philadelphia	.07
Boston	.07
Baltimore	.06⅝
Charleston, S. C.	.06⅝
U. S. Motor, 65 and above:	
*New York (Bayonne)	.07¼
Philadelphia	.07¼
Boston	.07¼
Baltimore	.07
Charleston, S. C.	.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:	
Below 60 octane	.05⅝ .05⅝
60-64.9 octane	.06
65 octane and higher	.06½ .06½

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05½
52-54 450 (blending)	.05½
54-56 450 (blending)	.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.02⅞ .03
Grade 18-55	.03½ .03⅝
Low vapor pressure grade:	
*14 lb. v.p. (max.)	.04½ .04⅝
*12 lb. v.p. (max.)	.04⅝ .05

*Nominal.

NORTH TEXAS—

Grade 26-70	.02⅝ .02⅝
Grade 18-55	.03⅛ .03½
Grade 26-70	.03¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.03¼

CALIFORNIA—

75-85 375-390	.05¼ .06

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr. 315-325 i.b.p., 110 flash, 540-550 e.p.	.04¼ .04⅝
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.04¼ .04½
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-42	.04⅜ .04½
42-44	.04½ .04⅝

NORTH TEXAS—

41-43	.04⅜ .04½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04½ .04⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04⅝ .04⅜

PENNSYLVANIA (inland refineries)—

45	.05½
46	.05⅝
47	.05⅝

CHICAGO (Based on Group 3)—

41-43	.04⅜ .04⅝
42-44	.04½ .04⅜

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03½ .05

NEW YORK (Bayonne, N. J.)—

*41-43	.04⅜

GULF COAST (domestic)—

41-43	.03⅜

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅜ .04
No. 1 straw, 38-40	.03½ .03⅝
No. 2 straw, 32-36	.03⅜ .03½
No. 2 dark, 32-36	.03½ .03⅝
No. 3, 28-32	.03 .03¼
No. 3, 15 and above, 28-32	.02⅝ .02⅝

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅜ .03⅝
No. 1 straw, 38-40	.03½ .03⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03¼ .03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03⅝ .03⅝
No. 3, 28-32	.03¼ .03⅝

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-40	.03⅜ .04
No. 1 straw, 38-40	.03½ .03⅝
No. 2 straw, 32-36	.03⅜ .03⅝
No. 2 dark, 32-36	.03½ .03⅝
No. 3, zero to 15, 28-32	.03 .03¼
No. 3, 15 and above, 28-32	.02⅝ .02½

NEW YORK (Bayonne, N. J.)—

*No. 1	.04⅞
*No. 2	.04½
*No. 4	.04¼

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½ .02⅝
No. 4, 24-28	.92½1.00
No. 4, 15 and above, 24-28	.77½ .82½
No. 5	.70 .75
No. 6	.65 .70
Below 18 fuel oil, industrial	.62½ .67½

NORTH TEXAS—

U.G.I. gas oil	.02½ .02⅝
No. 4, 24-28	.92½1.00
No. 5	.70 .75
No. 6	.65 .70
Below 18 fuel oil, industrial	.62½ .67½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅜ .03
10-14 fuel oil, industrial	.70 .75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60 .65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅜ .02½
No. 4, 24-28	.95 1.00
No. 4, 15 and above, 24-28	.77½ .82½
No. 5, 18-22	.72½ .75
No. 6, 10-16	.62½ .67½

PENNSYLVANIA (inland refineries)—

36-40	.04⅜ .04⅝

CALIFORNIA—

Los Angeles:

30-34 gas oil, per bbl.	1.00 1.20
24 plus diesel	1.00 1.25
24 plus diesel (bunkers)	1.10 1.30
12-16 (bunkers at tidewater)	.85 .95
10-16 (cargo lots)	.80 .95
12-17 (tankcars)	.70 .95

San Joaquin Valley:

10-18 (tankcars)	.65 .75

San Francisco:

24 plus diesel, per bbl.	1.30 1.35
24 plus diesel (bunkers)	1.35
10-16 (bunkers)	1.00

GULF COAST—

28-30 gas oil	.03¼ .03⅜
28-30 diesel (bunkers)	1.50
Bunkers (bulk cargoes)	.80
Bunker C (bunkers)	.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil	.04⅜
28-30 diesel (lighterage 6¼ plus per bbl.)	1.65
28-30 diesel (tankers)	.04½
*Bunker C (to ocean-going ships in N. Y. harbor)	1.05
Industrial fuel (tankcars)	.04

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.21
150-160 D, 0-10	.18
150-160 D, 15-25	.17½
150-160 E, 15-25	.17
100-110 D, 0-10	.16½
Steam Refined:	
630 green (treated)	.10½
600 light green (untreated)	.09
600 dark green (untreated)	.06½ .07½

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 510; 540-550 flash):

10 pour test	.24 .24½
15 pour test	.23 .23½
20 pour test	.22 .22½
25 pour test	.21. .21½
Steam Refined:	
600	.13 .13½
650	.14 .14½
600 Pennsylvania flash	.15 .15½
630 flash	.17½ .18
600 Warren E filtered	.15 .15½

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:

150-3	.10
180-3	.11½
180-4	.10⅝
200-3	.11⅝
200-4	.11⅜
250-3	.13⅝
250-4	.13¼
280-3	.14⅜
280-4	.14¼
300-3½	.15⅛
400-3½	.16
100-2 paraffin oil	.05⅝

15-20 Cold Test:

200-3	.10⅝
200-4	.10¼
240-3	.12⅜
240-4	.12¼
280-3	.13⅜
280-4	.13¼

GULF COAST—

Pale Oils:

200-3	.07 .07½
300-3	.07½ .08
500-3½	.08½ .09
750-3½	.09 .09½
1,200-3½	.09½ .09⅝
2,000-4	.09⅝ .10

Red Oils:

200-5-6	.07 .07½
300-5-6	.07¼ .07½
500-5-6	.08 .08½
750	.08½ .09
1,200-5-6	.09 .09½

CALIFORNIA (moving to dom. market)

Pale Oils:

100-2½-3	.06½ .06⅝
200-2½-3	.06⅝ .07
300-3-3½	.07 .07½
400-3-4	.09 .09½
450-3-4	.09⅝ .10
550-3-4	.10 .10¼
600-3-4	.10¼ .10½

Red Oils:

200-4-5	.06½ .06⅝
300-5-6	.06⅝ .07
350-5-6	.07 .07½
400-5-6	.08 .08¼
450-5-6	.08¼ .08⅜
500-5-6	.08½ .08⅝
600-5-6½	.09 .09½
700-6½ plus	.09½ .10
750-6½ plus	.10 .10¼
900-6½ plus	.10¼ .10½

PENNSYLVANIA—

150 vis. at 70° F., color, 400-405 flash:	
Zero pour test	.18½ .19
10 pour test	.17½ .18
15 pour test	.17 .17½
25 pour test	.16 .16½
180 vis. at 70° F., 3 color:	
25 pour test	.19 .19½
200 vis. at 70° F., 3 color:	
Zero pour test	.22½ .23
10 pour test	.21½ .22
15 pour test	.21 .21½
25 pour test	.20 .20½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02¾

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0255 .0260
124-126 (a.m.p.) w.c. scale	.0260 .0265

NEW YORK—

Wax in bags fully refined:

123-125 (a.m.p.) wax	.0445
125-127 (a.m.p.) wax	.0455
128-130 (a.m.p.) wax	.0480
130-132 (a.m.p.) wax	.0505
133-135 (a.m.p.) wax	.0535
135-137 (a.m.p.) wax	.0560
124-126 (a.m.p.) w.s.	.0240 .0250
124-126 (a.m.p.) y.s.	.0240 .0245
Petrolatum in barrels, carload lots:	
Dark green	.01⅞
Amber	.02¾ .03
Extra amber	.03 .03⅛
Lily white	.06⅝ .06⅞
Snow white	.07⅜ .07⅞
Cream	.05⅝ .05⅞

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.05⅝ .05½
60-62 400	.05⅛
61-63 390	.05⅝
64-66 375	.05⅝

LOS ANGELES—

U. S. Motor grades:	
53-55 octane	.04¼
55-56 octane	.04¼ .04½
65-67 octane	.04⅜ .04⅝
67-69 octane	.04⅝ .05
Above 69 octane	.05 .05¼
65 and above 400 e.p.	.05¼ .05⅝

KEROSENE

GULF COAST—

41-43 prime white	.03⅜
41-43 water white	.04
44 water white	.04¼

LOS ANGELES—

41-43 water white	.04¼ .04⅝

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder Stocks:	
600 Warren E	.21 .21½
600 S.R. unfiltered	.19 .19½
650 S.R. unfiltered	.19½ .20
600 flash S.R.	.20½ .21
630 flash S.R.	.23½ .24
Bright Stocks:	
8 color	.26½
6½ plus color in dilution	.26

NEUTRAL OIL

200-3 color	.26½ .27
150-3 color	.22½ .23

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.	.04125
125-127 a.m.p.	.0425
128-130 a.m.p.	.0450
133-135 a.m.p.	.0525
135-137 a.m.p.	.0550
Crude Scale:	
124-126 w.s.	.0260 .0270
124-126 y.s.	.0240 .0245

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gypsy Oil Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .30
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.28
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light *†	1.28
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1933)*	.78
Hogback, N. Mex.*	1.21
Ponders, Mont.* (Jan. 29, 1936)	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Dec. 1, 1933)‡	.75
Maljamar, N. Mex. (Sept. 29, 1933)‡	.75
Fort Collins and Wellington, Colo.‡ (Jan. 9, 1936)	See Note
Florence, Colo.	.98
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 20, 1933)	.88
Hudson, Wyo. (June 2, 1931)	.45
Sunburst, Mont.	1.25
Cat Creek, Mont.	1.28
Cut Bank, Mont. (May 22, 1934)	1.45

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat†	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duvall by Texas Co.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)	1.23
Midland, Mich. (Jan. 13, 1936)*	1.32
West Branch, Mich. (Jan. 14, 1936)	1.16
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Pure Oil Co. and Simrall Corp. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La. (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$.75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East Field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana. El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.46
Allegany, N. Y.	2.46

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.46
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	2.42
Group B (Includes Titusville district.)	2.41
Group C (Includes Turkey and Tidioute districts.)	2.40
Group D (Includes Bear Creek and Porkey districts.)	2.39
Group E (Includes Edeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.)	2.36

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clear naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.55

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$ .82

*F.o.b. ship, based on February transactions and exclusive of production and export taxes and bar dues.

G. Seldon Henry and Russell Cobb, of Tulsa, were in Denver, Colo., the past week where they took over a block of acreage in Kiowa County, Colorado, and are negotiating a deal for a deep test.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.14
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

STANDARD OIL CO. OF CALIFORNIA

Crude oil prices at the well effective March 7, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills	Buena Vista Hills Midway-Sunset except Lakeview Area	Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills
14-14.9	$.80	$.78	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.65	$.70	$.65	$.70	$.70	....	....
15-15.9	.80	.78	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.76	.77	.78	....	$.70	.66	.74	.66	.74	.71	$.70	....
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.83	.77	.80	....	.70	.68	.78	.68	.78	.72	.70	....
21-21.9	.88	.79	.74	.89	.93	.92	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.71	.82	.71	.82	.74	.70	....
22-22.9	.92	.82	.74	.92	.96	.96	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.74	.87	.74	.86	.76	.72	....
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.77	.92	.77	.90	.82	.76	....
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.80	.97	.80	.94	.86	.79	....
25-25.9	1.03	.95	.83	1.03	1.06	1.11	1.03	.92	.83	....	1.02	.95	....	.89	.99	.86	.88	.83	1.01	.83	.98	.90	.83	....
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.06	.98	....	.93	1.03	.90	.91	.86	1.06	.86	1.02	....	....	....
27-27.9	1.10	1.05	.88	1.11	1.13	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	.88	1.10	.88	1.06	....	....	....
28-28.9	1.14	1.10	.99	1.14	1.16	....	1.14	1.07	.99	....	....	1.06	....	.99	1.10	.99	.99	.91	1.16	.91	1.10	....	....	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.03	.94	1.20	.94	1.14	....	....	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.06	1.06	.97	1.25	.97	1.18	....	....	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.13	1.09	.99	1.29	.99	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.12	1.02	1.34	1.02	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.04	1.38	1.04	....	....	....	$1.19
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	....	....	1.23
35-35.9	....	....	....	....	....	....	....	1.42	....	1.36	....	....	....	1.25	....	1.29	....	....	....	....	....	....	....	1.27
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.32	....	....	....	....	....	....	....	1.31
37-37.9	....	....	....	....	....	....	....	1.51	....	1.42	....	....	....	1.33	....	1.37	....	....	....	....	....	....	....	1.35
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	....	....	1.39
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	....	....	1.43
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River and Round Mountain 70 cents for all grades. Kern Front 70 cents for all grades.*

Market Record of Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforsheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1936 High	1936 Low	Week ending April 25 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	3,300	109⅞	105	107	Amerada Corp.	788,675	N.P.	50cQ	4-30-36	$2.00	80	48½	55⅝	39
35⅛	27⅛	24,100	32¼	30¼	30½	Atlantic Refining	2,664,904	$25	25cQ	3-16-36	1.00	28	20½	35¼	21½
20	14⅛	29,300	18¾	17½	17⅝	Barnsdall Corp.	2,131,090	$5	15cQ†	5-1-36	‡.20	14¾	5⅞	10	5⅞
21⅝	14	84,600	19½	17⅝	18½	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅝	19¼	6⅝
15¼	11⅞	54,400	13⅞	12¾	13	Consolidated Oil Corp.	13,983,287	N.P.	25c	4-7-36	.25	12¼	6½	14¼	7¼
38½	30	27,200	34⅝	30	31⅝	Continental Oil of Delaware	4,682,671	$5	25c	4-30-36	.62½	35	15½	22⅝	15⅝
34⅜	22	13,500	30⅛	26¾	28⅞	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11¾	23½	12
12¼	6⅜	22,700	10¼	8⅝	9	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
23	18¼	11,100	21⅜	20	20⅜	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14⅜	9⅛
40	19⅞	8,600	34½	32	32¾	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅜	10
17½	13⅜	23,500	14½	13½	13¾	Ohio Oil Co.	6,563,377	N.P.	15cSA	12-14-35	.30	14¼	9¼	15⅞	8½
18	13⅛	1,000	14½	13½	13½	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6¾	9⅝	5½
4¼	1⅜	4,400	3¼	2½	2¾	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅝	38⅛	30,100	47	43	44¼	Phillips Petroleum	4,152,836	N.P.	25c†	6-1-36	1.25	40	13¾	20¾	13⅝
16½	11⅞	16,400	15⅝	14½	15⅛	Plymouth Oil Co.	1,050,000	$5	25c	3-30-35	.25	13	6½	16¾	7¼
24⅞	16⅝	52,700	22	19½	20⅝	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6¼
57	48⅜	1,000	56⅝	55⅞	56	Royal Dutch N. Y. shares	fl. 503,642,000	fl. 100	$1.70	8-1-35	1.70	48½	29½	39⅛	28⅝
43⅝	33¼	6,800	36½	33⅝	35	Seaboard Oil of Delaware	1,244,283	N.P.	15cQ†	3-14-36	1.00	36⅞	20¾	38⅜	20¾
19¼	15¼	10,100	17⅜	16½	16⅝	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
120	110½	600	115¾	115	115	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	111	63⅛	89	57
6¾	4⅞	6,300	5⅛	4⅞	5	Simms Petroleum	461,698	$10	1.00 liq.	1-27-36	11.75 liq.	18⅜	4⅜	17⅛	7⅛
31½	19½	4,400	27⅞	25⅝	25⅝	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	14	73,400	14⅞	14	14	Socony-Vacuum	31,154,379	$15	20cSA	3-16-36	.30	15¾	10⅝	19⅞	12½
47⅝	39⅞	28,100	43⅛	40	40½	Standard Oil of California	13,102,900	N.P.	25cQ†	3-16-36	1.00	41⅛	27¾	42⅞	26½
40⅛	32⅜	22,000	37⅝	35⅛	36½	Standard Oil (Indiana)	15,215,677	$25	25cQ	3-16-36	1.00	33⅝	23	32¾	23¼
30	25	200	26	25	25	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	....	32	20	41	26
70	51⅛	58,800	64⅜	60⅝	62¾	Standard Oil of New Jersey	25,856,081	$25	50cSA†	12-16-35	‖1.25	52⅜	35¾	50⅛	39¼
91	72	600	82	78½	78½	Sun Oil	1,733,013	N.P.	25cQ	6-15-36	$1 & 7% Stk.	77	60½	74¼	51½
39½	28⅞	41,800	38⅝	34½	35	Texas Corp.	9,340,069	$25	25cQ	4-1-36	1.00	30¼	16½	29⅝	19⅝
15¼	7½	18,500	11¾	10½	10½	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	....	9¼	3¼	6½	2½
19½	14¾	18,500	18¼	17	17⅜	Tide. Water Associated	5,642,342	N.P.	15cQ	6-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	100	105⅛	105⅛	105⅛	Tide Water Associated pfd.	626,221	$100	$1.50Q	4-1-36	$6.50	104½	84	87	64½
28½	23⅛	11,300	25½	23¾	23¾	Union Oil of California	4,386,070	$25	25cQ	5-9-36	1.00	24	14¾	20½	11½
31⅝	22⅝	800	25¼	24¾	25	Union Tank Car Co.	1,200,000	N.P.	30cQ	3-2-36	1.20	26½	20⅞	25¾	15⅝
5¼	2¾	5,900	4½	4	4¼	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3⅛	1	5⅝	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35.

Market Record of Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforsheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1936 High	1936 Low	Week ending April 25 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
20¼	13¼	9,100	18¾	16½	17⅛	Bridgeport Machine Co.	150,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	⅛
50	39¾	250	43	42¾	43	Buckeye Pipe Line Co.	200,000	$50	75cQ	3-14-36	$3.00	42½	30½	38	26
4⅞	2½	67,900	4⅞	4	4½	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	113	50	115	115	115	Chesebrough Mfg. Co.	120,000	$25	$1Q†	3-31-36	6.50	157	115	150	116
7⅝	3	131,000	5½	4½	4¾	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4	1⅜	5,200	2¾	2½	2¾	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	½
4⅛	1½	4,200	2⅞	2⅝	2¾	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34⅜	19⅞	21,900	29¼	27	28⅝	Creole Petroleum	6,974,356	$5	20c	12-31-35	.20	23¾	10	14⅜	9⅝
12	9	500	11	10⅝	10⅝	Darby Petroleum	509,696	$5	25cSA	1-15-36	.50	8⅞	4	7½	4⅛
4⅜	1⅞	1,400	3⅞	3½	3½	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	¾	2¼	1
44	39	150	41¼	40¼	40¼	Eureka Pipe Line	50,000	$50	$1Q	5-1-36	4.00	38	33¼	37	30
98	72	13,500	91½	82½	85	Gulf Oil Corp.	4,538,101	$25	25c	4-1-36	....	74¾	50¼	76¾	49¾
76½	62½	4,400	67¾	65	65¼	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	4-1-36	1.25	64	44	49½	33¼
24½	20	20,900	23½	21⅞	22½	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	12-2-35	1.25	22½	15⅝	17⅞	12⅝
9¼	5½	300	7½	7	7	Indiana Pipe Line	300,000	$10	20cSA	5-15-36	.35	6⅛	3⅝	6⅞	3⅝
39⅝	33½	13,100	37⅝	36⅛	37¼	International Petroleum	14,247,088	N.P.	$1.25†‡	12-2-35	2.50	39¾	28	33⅜	19⅜
15⅛	9⅞	34,600	14⅝	13½	14	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-16-36	.10	11⅜	4⅜	5	2⅛
15	7⅜	7,300	12⅞	11⅝	12	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	8¼	3½	6	3⅜
14¼	9⅞	4,700	13⅜	12½	12¾	Lone Star Gas	5,382,723	N.P.	20cSA	2-15-36	.30	10⅞	4½	8⅜	4¼
8⅝	5	2,000	6⅛	5¾	5⅞	Mountain Producers	1,682,182	$10	30cSA	12-31-35	.90	5¾	4⅛	5½	4
23	19¼	2,300	20⅞	20¼	20⅝	National Fuel Gas	3,810,183	N.P.	25cQ	4-15-36	1.25	20	11¾	18⅛	13⅛
15¾	10¼	1,100	11½	10½	10½	National Transit	509,000	$12.50	35cSA	12-16-35	.75	10⅝	6¾	9½	7
4½	2⅞	1,100	3¾	3⅜	3⅜	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1¾
6⅝	1⅝	3,100	4¼	4	4	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
6¼	4½	100	5⅝	5⅝	5⅝	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4¾	3
9¼	7	200	7⅜	7¼	7¼	Northern Pipe Line	120,000	$10	25cSA	2-2-36	.50	8	5¼	7	4⅝
6¼	3¼	57,000	6	5¼	5¾	Pantapec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4½	25,000	16	15	15⅝	Root Petroleum Co.	336,045	$1	....	.....	....	5	1½	....	....
4¾	1⅞	1,500	3¾	3¼	3½	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3⅜	⅞
10	7	1,700	8	7⅞	8	Salt Creek Producers	1,496,859	$10	40cSA	12-31-35	1.20	7½	5½	7⅞	5½
40½	32½	1,000	38	35½	37¼	South Penn Oil	1,200,000	$25	50c†	3-31-36	1.35	34½	21⅝	26½	17½
7⅞	4⅝	200	5½	5⅜	5⅝	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5	3⅞	5½	3½
56	54	No sales	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	4-1-36	5.00	56	44¼	47	41
23⅜	17¾	4,700	18⅛	17¾	17⅞	Standard Oil of Kentucky	2,604,790	$10	25cQ†	3-16-36	1.25	24	18	18⅜	14⅝
14⅝	11½	600	13	12⅛	12⅛	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7¾	16⅞	8¼
36¼	21¾	2,700	34¼	31½	31½	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	23⅝	11½	28½	12¼
5	2⅝	49,200	5	4½	5	Sunray Oil	1,610,810	$1	....	4-15-31	....	2⅞	⅝	2	ⅱ
9⅝	6	3,000	6¾	6⅝	6⅝	Texon Oil & Land	336,028	N.P.	15cQ	3-31-36	.60	6⅞	5	11	4⅜
7½	4½	12,200	5⅛	4¾	4⅞	Texas Gulf Producing Co.	888,072	N.P.	....	12-29-34	....	4¾	2½	7	3⅝

*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note.—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

Speed and Better Atomization Offered in New Spray-Gun

Greater speed, less air consumption and better atomization are improvements claimed for Binks new Thor model 7 spray-gun. The Thor model 7

has been engineered after giving careful consideration to all problems of spray-gun users. It includes the suggestions of engineers of some of the country's largest industries, where smart finishing must be obtained at the lowest possible cost.

A striking departure is the introduction of color into the gun body, which is a durable drop-forged aluminum with a black electrolytic coating for surface protection. Full details on the Thor model 7 can be obtained from Binks Manufacturing Co., 3114 Carroll Avenue, Chicago.

Bulletins, Booklets and Other Literature for the Trade

The latest bulletin from Landis Machine Co., Waynesboro, Pa., features the Little Landis pipe-threading and cutting-off machine, employing the Landis die-head and long-life chaser.

"Correct Anchoring" is the title of an interesting 24-page booklet prepared by A. B. Chance Co., Centralia, Mo., and describing Never-Creep anchors for oil field and other uses. Helpful engineering information is included.

A bulletin announced by Pennsylvania Pump & Compressor Co., Easton, Pa., describes its class 3-ATC Oilfreair compressor.

A new edition of the booklet featuring the Babcock & Wilcox integral-furnace boiler is ready for distribution. Copies may be obtained by writing to Babcock & Wilcox Co., 85 Liberty Street, New York.

A six-page bulletin issued by Ingersoll-Rand Co., 11 Broadway, New York, describes the Cameron Motorpump as used in air conditioning service.

Imperial splashproof squirrel-cage motors, types E, EN and EH, are described in a bulletin available from Imperial Electric Co., Akron, Ohio.

A new book of 32 pages with 30 illustrations, has been published by Link-Belt Co., Indianapolis, Ind., on Silverstreak silent chain drives.

Engineers and operators should be especially interested in a 32-page bulletin announced by Foote Brothers Gear & Machine Corp., 5301 South Western Boulevard, Chicago, on oil-well pumping reducers. Valuable tables, along with charts and methods of selecting reducers are included.

D-C turbine-generator sets of 10 to 400 kw. are described and their operating advantages enumerated in bulletin GEA-2,295, published by General Electric Co., Schenectady, N. Y.

A bulletin issued by Staynew Filter Corp., Rochester, N. Y., discusses the Model A automatic air filter for all ventilating purposes.

New pieces of literature announced by the Babcock & Wilcox Co., 85 Liberty Street, New York, are a 24-page bulletin on the company's integral-furnace boiler and two eight-page bulletins, one on insulating firebrick and one on refractory mortars and plastics.

Articles of special interest to oil men are contained in the current issue of the Water Tower, published by Chicago Bridge & Iron Works, Chicago, including one on the Wiggins balloon system for stopping evaporation losses of oil products.

Foxboro Develops New Device for Remote Valve Control

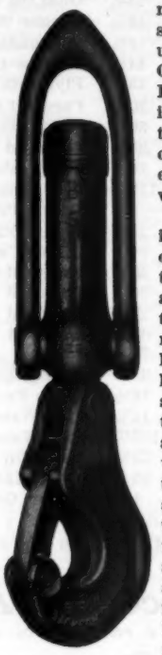
To supplement automatic control systems, the Foxboro Co., Foxboro, Mass., has developed the new remote valve control. In many processes automatic controllers stabilize the operation to such an extent that noncritical flows may be governed by hand valves, which need be readjusted infrequently. However, if these hand valves are not easily accessible, even the few necessary adjustments will be neglected. A Foxboro remote valve control mounted on a centrally located panel enables the operator to adjust manually the degree of opening of an out-of-the-way, inaccessible valve without moving from his station. He can reset a valve several hundred feet away to control temperature, pressure, flow or liquid level, using readings from his recording instruments to guide him in making the correct adjustments.

A feature of this instrument is the extreme precision of valve setting. It is easy to make a

change in pressure on the diaphragm motor of the controlled valve as small as one-quarter inch of water or less. This means that the valve opening can be altered a few thousandths of an inch to produce exactly the desired flow.

Locking Arm Design Increases Safety of BJ Tubing Hook

To meet the necessity for handling tubing safely, rapidly and economically, several improvements have been made in the design of the BJ tubing hooks manufactured by the Byron Jackson Co., 2150 East Slauson Avenue, Los Angeles. By means of a locking arm, these hooks eliminate the hazard caused by the flexing of the lower portion of an open-end hook which occurs when weight is being carried.



This locking arm is a "built-in" feature of the hook. When open it extends forward from the bill of the hook member to act as a guide for picking up the elevator links. It then automatically closes and locks as the links seat in the hook and the load is picked up. It then offers a dual safety feature. It joins the bill of the hook to the body and forms a C-link which prevents the repeated flexing that tends to produce metal fatigue and possible crystallization of the lower portion. It prevents the links from jumping the hook and thus endangering the operator. The locking arm mechanism is completely enclosed in the hook. The releasing lever is also enclosed in a recess in the back of the hook at the proper balance point to provide ease in handling. The locking arm cannot open under load, since in addition to being latched, the inner end is held down by the elevator links.

Tests of Unusual Severity Are Withstood by Dayton Belt

A new belting which after severe laboratory and field tests is said to be impervious to excessive oil, is announced by the Dayton Rubber Manufacturing Co. It is called the Dayton Daycoil oilproof V-belt. The secret of its oilproof properties is in the fact that its base is a synthetic rubber called DuPrene, although DuPrene is only one of several synthetic materials used in its construction. Before announcing the new belt to the trade, the manufacturers put it to test under conditions reported to have been much more severe than would ever be encountered. The belts were run dripping with oil, under full rated load and with reverse idlers and other attachments to stress the strain and intensify the wear. They are said to have shown no signs of swelling, stretching or wearing after hundreds of hours of this testing.

New Line of Tokheim Pumps

Tokheim Oil Tank & Pump Co., Fort Wayne, Ind., announces an improved line of Model 36 pumps, known as 36B, including four models in both the money-computer and clock-dial types. These are the standard pump, known as the Tokheim Moneymaker; standard pump with accessory display compartment, known as the Jumbo Display; showcase model named the Salesmaker, and the Twin Unit pump. In this improved line of pumps Tokheim is said to have maintained the mechanical excellence of its previous models. Many changes, however, are indicated by mechanical refinements, and improved appearance.

Manganese Steel Double-Wall Wheel Can Stand Hard Use

To obtain full advantage of characteristics of 13 per cent manganese steel, and to eliminate breakage of the web, engineers of the American Manganese Steel Co., Chicago Heights, Ill., have designed the double-wall crane wheel illustrated. The walls are continuous with the flanges, giving them a strong but elastic support and high resistance to side thrusts. The walls are integrally tied together with internal cross-spokes. Metal sections are equalized, making possible a perfect heat-treatment, resulting in the maximum toughness in the steel.

The inherent structural strength of the new double-wall design, combined with the toughness, strength and wear-resistance of manganese steel, is said to make these wheels economical in all traveling-crane service, and particularly under the heaviest, most abusive and most abrasive conditions likely to be encountered.

Motor Is Placed on Wheels by New Straitline Motor-Base

The motion-control Vari-Pitch Texrope sheave announced by Allis-Chalmers, Milwaukee, Wis., employs the straitline automatic ball-bearing motor-base illustrated here. This motor-base provides a convenient place from which to operate the Vari-Pitch sheave and maintains a uniform belt tension throughout the speed range adjustment. It eliminates guesswork, as its dial indicator shows the tension of the V-belts.

The new motor-base places the motor on wheels when used in conjunction with a motion-control Vari-Pitch drive. Four ball bearings, totally enclosed and lubricated for the life of the unit, support the motor and the upper half of the Straitline motor-base, assuring ease of operation with little or no sliding friction. The travel of the base is in a straight line and always is securely anchored to its foundation.

The dial indicator enables the operator to maintain the correct belt tension at all times, assuring maximum belt life. The handwheel on the base controls the speed of the sheave and simultaneously moves the motor sufficiently to compensate for the change in centers between shafts resulting from variation in diameter of the Vari-Pitch sheave.

Schramm "Utility" Compressor Is Unusually Lightweight

Schramm, Inc., West Chester, Pa., has introduced a complete new line of portable compressors to be known as the "Utility" design. These "Utility" compressors operate through direct drive from either gasoline or diesel engine at approximately 1,200 r.p.m. The compressor unit is six-cylinder, of small bore and stroke and lightweight reciprocating parts. Because of the lightweight castings which can be used the manufacturer claims a saving in weight of 50 per cent or more.

Other features include mechanical intake valve action to assure perfect timing of air entering pistons while allowing the full area of the compressor head to be devoted to the discharge valve. The compressors also use a full force feed lubricating system. Unloading is controlled by air pressure regulating the action of unloading valves.

Bridgeport Doubles Capitalization

Bridgeport Machine Co., Wichita, Kans., has more than doubled its capitalization by the sale of 75,000 shares of its unissued common stock at $13 a share and an option to sell an additional black of 35,000 shares at $17. This increases the company's capital and surplus from approximately $1,500,000 to more than $3,000,000. The company makes or handles virtually all equipment required in oil production.

Quiet Valve Operation Gained by Elimination of Impact

A new development in valve design which promises to be of great importance to air- and gas-compressor users is the channel valve announced by Ingersoll-Rand Co., 11 Broadway, New York. More of the valve opening than usual is utilized,

which tends toward slower air speeds through the valve ports.

The only moving parts are a number of "valve channels," within each of which is a flat spring. The spring fits snugly within the channels so that when the valves lift, the springs straighten and a small quantity of air is trapped between springs and channels. Thus are formed air cushions whose function it is to decelerate the valve channels after opening and bring them to a stop softly and quietly without impact.

The successful accomplishment of this makes a quiet, practically silent valve. The elimination of impact means that one of the conditions usually most destructive to compressor valves no longer has to be considered. Valve channels consequently are made light in weight, their channel form being relied upon for strength and rigidity. They lift straight off the seat without flexing, returning to the same position. Springs also are designed solely as springs because they are not called upon to act as valves.

Van Auken-Ragland, Inc., advertising agency, will move into larger quarters on May 1 in the Twenty North Wacker Building, known also as the Civic Opera Building, Chicago.

I Am a Supply Man

By R. E. GIDDENS

Lucey Products Corp., Tulsa

I am a supply man, or one of a sizable group of individuals whom the great oil industry chooses to classify collectively as supply men. I write this in the first person because it satisfies my personal pride to be called and to call myself a supply man. Doubtless others in this great and interesting business feel likewise. Proud to be called supply men. They should.

The oil industry owes much to the supply man. Many, many great oil companies owe their very existence to a supply man's faith in the ability and integrity of an individual, or group, with little more liquid assets than a broken-down rig and a farmer's permission to drill a well in his pasture. I could name such companies. You could name dozens. The supply man assumes great responsibilities. He practically carries the responsibility of the industry's whole gigantic investment. Indirectly, of course, but to such a degree that he cannot help but recognize it and to consider it his own problem and particular worry.

He follows your wildcats with his stores, taking his chances that the magnitude of the field will produce enough business to make his store investment profitable. Before you have finished your second well his store is completely stocked to take care of your every need. He practically eliminates your own warehouse investment, so complete is his service. If the Bluesky Oil Co. chooses to connect its tank batteries and gathering lines with reclaimed 5½-inch casing on which it has cut 8-thread connections, the chances are he will have a complete stock of valves and fittings for it. He hopes to sell all his "bastard" stock before the casing is used up. If not, it's just another overstock item which he will eventually junk and write off.

The supply man lives in constant dread that you will need something in an emergency and that his not having it ready for immediate delivery will cause you great inconvenience and expense. The eerie midnight jingle of a telephone instills mortal terror in a supply man for fear that the angry voice at the other end will inform him that the Square Hole Drilling Co. has broken the drumshaft on the Minnie No. 1, and that the hole is liable to cave in on his drillpipe any minute, causing the loss of a $50,000 hole, and that unless he has a new shaft on his dock for that haywire drawworks (which in reality has been obsolete for 10 years and the only one still in operation anywhere) he had better leave the country.

The supply man keeps your equipment and methods modern and up-to-date. He is constantly in search of new ideas himself and quick to recognize and develop your own good ideas. He gave you cable tools and stocked every imaginable fishing tool, sub and special tool. He developed the rotary for you that allowed you to drill your wells in a fraction of the time formerly required. He gave you little coffee mills in the early Gulf Coast fields. He gave you bigger and better equipment at Burkburnett and Tonkawa. He gave you the present-day equipment to drill the deep Oklahoma City wells in 45 to 60 days, and some of the very deep Gulf Coast wells in almost unbelievably short time. He is now developing for you power-driven rigs to further reduce your drilling expense. He spends hundreds of thousands of dollars developing sucker-rods and production equipment to combat your particular problem.

You are indebted to the supply man's advertising appropriation for this very fine trade paper. He pays for your oil show and, the chances are, for the material part of your entertainment.

He likes to do all these things. His boss expects him to know you, and you and you. He knows your farm boss, your superintendent, your drillers and roughnecks, and your toolpushers. He must know more than your purchasing agent because he is expected to furnish information when asked. He must be able to furnish technical information and advice to your engineers. He must be in position to discuss terms and financing problems with you.

The supply man's job is an interesting one, allowing him contact with all branches of the great oil industry. Because he follows the activity from new field to new field, drives current-model cars, is allowed an expense account that at least permits of the best the field town provides, he is occasionally inclined to take himself too seriously. By and large, however, he is serious, fully realizes his responsibility and, indeed, is a credit to his branch of a great industry.

Canadian Fields

By VICTOR LAURISTON

CHATHAM, Ontario, Apr. 25.—In North Turner Valley, Model Oils No. 3, LSD 1, section 22-20-3w5, bottomed 506 feet in the Madison limestone at 6,240 feet, has been given acid treatment and is now cleaning out for a production test. With about 300 feet of loose rock in the bottom of the hole, the original wet gas flow has practically doubled. It looks like a small commercial producer. Farther east, Royalite Oil Co. No. 27, LSD 4, section 23-20-3w5, is testing production in the lime at 5,570 feet.

South Turner Valley

In section 21-18-2w5, South Turner Valley, Highwood Sarcee Oils No. 2, LSD 1, is below 4,000 feet. It is logging higher than other South Turner wells, indicating a considerable rise in the formations toward the south, or possibly a flattening and widening of the structure.

In section 33-18-2w5, Royalite Oil Co. No. 3 Sterling Pacific, LSD 13, has moved three boilers from Royalite No. 27 location in North Turner Valley, and is starting on derrick, northwest corner of the section which has already three deep lime producers.

Tests in the Foothills

Carl Olson and associates are arranging for a test on the Little Coulee structure, east of the main Grease Creek structure. Recent examination has indicated an extension of the potential field southeast toward the Little Red Deer River. Imperial Oil, Ltd. has held extensive acreage on the Grease Creek structure for about eight years. Plans for a test under a unitization scheme are being discussed.

Aldersyde Operation

In the High River-Aldersyde area east of Turner Valley, Arca Development Corp. No. 1, NW section 24-18-1w5, is rigging and installing boilers for a 7,500-foot deep test.

Kootenay Dome Operations

On the Kootenay dome west of Calgary, between the west end of the Morley Indian Reserve and the Moose Dome structure, Roxana Petroleums, Ltd. is constructing 2½ miles of road from the Kananaskis River to No. 1 location in section 8-24-7w5. The company holds, subject only to government royalty, some 2,400 acres in Township 24-7w5, and location is 40 miles west of Calgary and 7 miles south of Ozada Station, on the Canadian Pacific Railway main line. The Kootenay dome has never been tested by drilling.

Royalite Operations

Operations of Royalite Oil Co. in 1935 showed a gross profit of $1,630,864, net $738,172. Sales amounted to 510,083 bbls. of crude, crude naphtha and natural gasoline and 7,306,726,000 feet of gas. This compared with 507,138 bbls. and 6,535,685,000 feet in 1934. The average price was $2.33 a barrel against $2.49 the previous year.

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Leases—Production

DRILLING BLOCK Young County, Texas, 100 acres top of structure; 750 ft. first oil sand; 40 gravity oil; cheap drilling near producing wells.
Roy G. Barton, Box 191, Clovis, N. Mex.

SHELBY COUNTY at last has a producing well. Several tests now going down. This County has been worked out and approved by best geologists. Have 1000 acres on structure for drilling contract. Small bonus. C. A. Parker, Box 451, Center, Texas.

BOSQUE CO., TEX., drilling block ready for bonafide drilling contract. Good geology. Immediate action. L. E. Tennison, Texas Securities Permit 669, Clifton, Texas.

Drilling Block—3,000 acres in Texas Permian Basin. On line between two shallow pools: Humble holds two large blocks in close proximity. Address H. B. Opp, Burnet, Texas.

CONSIDER drilling proven acreage of merit, Kans., Okla. or Tex. on interest basis.. Submit full details first letter. Box 5005, Shawnee, Oklahoma.

NEW MEXICO Oil and Gas Leases and Royalties. Also inquiries and listings wanted. F. R. WARN, Santa Fe, New Mexico.

ECTOR COUNTY Drilling Block: 960 acres short distance northwest Goldsmith pool. Sound reasons for heavy production. Wire H. B. Opp, Burnet, Texas.

LANDS, Leases, Royalties, anywhere, bought, sold. Lands, $2 acre, up. Leases 25c acre, up. Advise needs. American Investment Co., Houston, Texas.

SCOUT reports furnished on any Panhandle Oil Property, with my ideas of values, etc. Price $5.00 and up. Scouting in New Mexico and Oklahoma after May the 15th. E. B. Reeves, Box 475, McLean, Tex.

10-ACRE LEASE for sale at prevailing prices, one quarter mile from C. A. Parker's discovery well Shelby County, Tex. J. D. Taylor, DeSoto Hotel, New Orleans, La.

WILL BUY New Mexico and Texas oil leases. ROY G. BARTON, Clovis, New Mexico.

SAN JUAN Basin, New Mexico, Offering 320 acres top of structure including Midwest Discovery well, high gravity oil 1,000 feet; wonderful deal for developer or promoter.
Roy G. Barton, Box 191, Clovis, N. Mex.

For Sale, Lease *or* Deed, Alabama acreage, Marion Co., geological place to drill. D. Cooper, Hamilton, Alabama.

DRILLING BLOCK — 8,000 acres fee, and you take permit, making solid block, near Casper. P. O. Box 1162, Casper, Wyo.

10,000 Acre Lease for Sale—5-year paid up in Schleicher County, Texas. Big drilling campaign just getting under way, one 12,000,000 foot gasser completed, two wells now drilling, two more to start soon, Address H. B. Opp, Burnet, Tex.

Leases—Production

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

FOR SALE, OIL AND MINERAL RIGHTS, under lands in Eastern Colorado, leased in solid blocks, largely by major companies; taken after seismic surveys and core drillings. Titles clear. Get ready for the next big oil play. Warren Shamburg, Burlington, Colorado.

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Engineer Wanted

Engineer experienced in designing oil field drilling equipment. Good opportunity for competent man. Give full particulars of experience and education which will be considered strictly confidential. The men in our Company are acquainted with this advertisement. Address Box H-221, The Oil and Gas Journal, Tulsa, Oklahoma.

WANTED for sales work in Mid-Continent territory. Technically trained engineer with practical experience in design, field or shop. Age 25 to 30 years. Give full details in reply which will be treated confidentially. Address Box H-233, The Oil and Gas Journal, Tulsa, Oklahoma.

Special Offering of Pumps

We are offering a miscellaneous assortment of pumps which have accumulated in our stocks recently and will be sold at bargain prices for quick sale.

1—Worthington Duplex Pump, size 18x5x18, Serial No. 27874S, 4" suction, 4" discharge.

1—Worthington Duplex Pump, size 18x5x18, Serial No. S29037, 4" suction, 4" discharge.

1—National Transit Duplex Pump, size 18x5x18, Serial No. 20511, 6" suction, 4" discharge.

1—Worthington Duplex Pump, size 14x8½x12, Serial No. 678832W, 6" suction, 6" discharge.

1—5" Worthington Centrifugal Pump, Class B-5, Serial No. 812212W, 715 g.p.m., 1,150 r.p.m., 98 ft. hd., 8" suction, direct connected to General Electric Induction motor, Model 16 and 72, Type KT 532 Block 6-30-1,200, Form B, Volts 2,200, amp. 7—No. 4565534, 30 H.P. continuous 40, 3 ph., 60 cy., 1,160 r.p.m.

1—3" Byron Jackson Centrifugal Pump, multi-stage, Serial No. 99714, 1,750 r.p.m., dated 1/19/1928, direct connected to General Electric Induction motor, 200 H.P., type KTP 557, Block 4-200-1,800 Form E, 440 V, 224 amps., No. 4834558, 3 ph., 60 cy., r.p.m. full load 1,760, Model 17526 with General Electric manual control compensator type CR 1,030, Cat. No. 2019085 G 4.

1—3" Byron Jackson multi-stage centrifugal pump, 1,750 r.p.m., Serial No. 99714, dated 1/18/1928 direct connected to General Electric Induction motor, 200 H.P., Model 17526, Type KTP, 557 Block 4-200-1,800 Form E, 3 ph., 60 cy., 440 V., 224 amps., speed full load 1,760 r.p.m., No. 4948262 —With General Electric manual control compensator type CR 1034, Cat. No. 2019085 G 4.

1—Worthington Duplex (piston type) Pump, Size 10x12, 8" suction, 6" discharge, Serial No. 280029 direct connected to General Electric Induction Motor 25/12.5 H.P., Model 17 E 294, Type KT 536, Block 16-25-900-450, Form B, 440 volts, amps. 32/531, No. 4950630.

2—Pacific, 8 stage, high pressure, solid shell Pumps, minimum capacity 2,000 bbls., 350 lbs. per 24 hours to maximum capacity 8,000 bbls., at 705 lbs. No power.

2—LeCourtnay Centrifugal Pumps, size 5x4 horizonal split shell, 3 stage, 300 g.p.m., 400 ft. hd. No power.

2—Byron-Jackson Centrifugal Pumps, 3 stage, size 3", 160 g.p.m., 1,110 ft. hd. No power.

1—Kinney Gear driven Rotary Pump, size 6", 725 g.p.m., 200 lbs. pressure, type SD 888, Serial No. 8497. No power.

1—Union Centrifugal Pump, 5 stage, size 4", Class M, serial No. 136510, 225 g.p.m., 427 ft. hd. direct connected to General Electric Motor, 40 H.P., 3 ph., 60 cy., 220 volts, 1,740 r.p.m.

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Main Office—1446 Guinotte Ave., Kansas City, Mo.

Branches

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25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.

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Spudders and Drilling Machines.
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2—80 H.P. Bessemer direct driven tandem compressors. 12" low, 7" high cylinders. (Ideal for repressuring.)
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400 ampere portable welder. A. C. and D. C. generators. Gas engines. Boilers. Noel Owens, Chanute, Kansas.

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

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United States and Canada.
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Addresses Wanted

Gregg, ExShell; Swan, ExMag; LaCoss, ExPhillips; Nance, ExMoran; Jeffres, ExEmpire. Pampa, Tex. Legal News.

Financing

JAMES E. MILLER, 604 W. Seventh St., Tulsa, Okla., will aid in financial marketing problems. Fee basis.

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PROSPECTUSES prepared and deals shaped up for registration or exemption under Federal Security Act. Fee basis. John Morris, Box 5411, Philadelphia, Pa.

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The Marathon Refinery at Boynton, Oklahoma
The Sinclair Refinery at El Paso, Texas.

Everything for sale in these plants. ALL of our EQUIPMENT is RECONDITIONED. Inventories on request. Pressure tanks and Hot Oil Pumps our specialty. All sizes pipe, valves and fittings.

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64 North Second Street Kansas City, Kansas.

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We will erect latest type 55,000 bbl. all steel storage tanks at a great saving.

Over 500 tanks on hands from 500 bbls. to 80,000 bbls. Ready for delivery.

50—55,000 Bbl. tanks now being cut down, Haynesville, La. Will sell complete tanks or sheets.

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Names and addresses in any State.
Royalty Lists, Box 105, Ft. Worth.

Petroleum Eng. Laboratories

GEOLOGIC STANDARDS COMPANY
1600 East 5th Place, Tulsa, Oklahoma.
Porosity-Permeability-Saturation Tests.

Ranches and Farm Lands

1430 ACRE PLANTATION IN RED RIVER VALLEY ADJOINING NEW CHEYNEVILLE OIL FIELD

This plantation is located between Cheyneville and Bunkie, La. on concrete Highway No. 71. Improved with beautiful colonial residence, set in grove of magnificent trees. It is traversed by Bayou Bouef giving perfect natural drainage. Very fertile type of Red River land that makes bale of cotton per acre, finest potato and sugar cane land. Within two miles of sugar mill.

The plantation is located only 1½ miles from new proven Cheyneville oil field where they have recently brought in many new producing wells and only one dry hole. The field is not on a salt dome and it is predicted that this plantation will be in direct line of production. Adjoining farm was leased at $35 per acre for oil and gas rights. Land within one mile has brought $100 per acre for royalty rights. Neither lease nor royalties have been sold on this farm.

Place belongs to large Insurance Company and they will either sell place as a whole, make oil lease or sell royalty. Land with 1/16th oil reservation can be sold on attractive terms at $50 an acre.

Also 100 other farms and plantations in Louisiana for sale.

THE NEELY BOWEN COMPANY
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Incorporations

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CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.25*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

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5-8—Dallas, Tex., A.G.A. Natural Gas Department, Baker and Adolphus Hotels.

13-15—Tulsa, midyear meeting, American Petroleum Institute, Mayo Hotel.

13-15—Tulsa, Natural Gasoline Association of America, fifteenth annual convention, Hotel Tulsa.

15—Tulsa, Institution of Petroleum Technologists, American Meeting, Mayo Hotel.

16-23—Tulsa, International Petroleum Exposition and Congress.

21—Tulsa, Independent Petroleum Association of America, midyear meeting.

22—Tulsa, National Stripper Well Association.

25-27—New York, A.G.A. Production and Chemical Conference.

25-28—New Orleans, La., National Association of Purchasing Agents Convention.

29-31—Dallas, Tex., National Oil Scouts Association, Baker Hotel.

June

17-20—Dallas, Tex., American Society of Mechanical Engineers.

18-19—State College, Pa., Pennsylvania Grade Crude Oil Association, thirteenth annual meeting.

June - July

29-July 3—Atlantic City, N. J., A.S.T.M., annual meeting.

September

7-12—Pittsburgh, Pa., American Chemical Society, semiannual meeting.

?—Tulsa or Oklahoma City, American Petroleum Institute, Division of Production, Mid-Continent district.

October

?—Cleveland, Ohio, American Institute of Mining and Metallurgical Engineers.

November

9-12—Chicago, American Petroleum Institute seventeenth annual meeting.